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Evaluating the Incredible Years Toddler Programme in disadvantaged areas of Wales

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Evaluating the Incredible Years Toddler programme in disadvantaged areas of Wales

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Summary

The purpose of this research project was to evaluate a preventative parent-training programme delivered as part of the community wide Flying Start (FS) initiative. Flying Start was introduced in 2007 across Wales with the aim of increase service provision for families in Wales living in areas earmarked by the Welsh Government (Welsh Government) as experiencing high levels of deprivation.

The Welsh Government provided Bangor University with 114k to independently evaluate the delivery of Incredible Years Toddler parenting programme (IYTPP) in Flying Start community settings, alongside the other three components of Flying Start. This funding, along with three years of PhD funding for the thesis author provided by the Coleg Cymraeg Cenedlaethol provided the opportunity to conduct three studies.

The first study explored the baseline characteristics of the small sample that were recruited for the RCT trial in terms of level of risk and need of intervention. Risk factors for poor child outcomes were identified and comparisons drawn with a previously recruited sample of disadvantaged families that took part in an RCT of a parenting intervention within Sure Start services (Hutchings *et al.* 2007). The second study evaluated the short-term effectiveness of the IYTPP using a rigorous RCT design, comparing families allocated to receive the IYTPP intervention with control families. The third study explored the longer-term effects of intervention for families who had provided data across a twelve month period, and explored whether the intervention had different effects for the families who were experiencing elevated levels of the risk-factors identified in study one.

The study concluded that to effectively allocate resources to families with the greatest needs, additional targeting measures identifying individual level of risk should be utilised. Delivery of the intervention saw modest short-term improvements in parental mental well-being for intervention families. Long-term findings support the work of others, demonstrating sustained improvements, with families experiencing elevated levels of risk seeing comparable, and often greater improvements when compared with families with a lower level of risk.

CHAPTER 1

GENERAL INTRODUCTION

Introduction

The introduction to this thesis outlines some of the key factors surrounding childhood conduct problems, highlights some of the risk-factors associated with their development and discusses the developmental trajectory for children displaying early signs of problems that put them at risk of developing longer term difficulties. It then discusses the central theme of the thesis, the role of parenting and how it can be supported to result in the prevention or reduction of significant child mental health problems.

Child Conduct Problems

Childhood conduct problems (CCP), or their clinical manifestation 'Conduct Disorder', are typified by persistent anti-social behaviour, over and above those problem behaviours that are typical childhood misbehaviours. A diagnosis of childhood conduct disorder requires a persistent pattern of misbehaviour including theft, rule breaking and violence against animals and people (American Psychiatric Association, 2000). The prevalence of conduct disorder in the UK is estimated at 5% (National Institute for Health and Clinical Excellence; NICE 2006), however the prevalence is estimated to be more than twice as high in economically deprived areas (Allen, 2011a; Attride-Stirling, Davis, Day & Sclare, 2000; Caspi, Taylor, Moffitt, & Plomin, 2000; Webster-Stratton & Hammond, 1998).

Risk-factors Associated with CCP

Key factors associated with increased risk of childhood conduct problems include both family circumstances and specific parenting behaviours with risk-factors often

interacting in complex ways (Keirnan & Mensah, 2011; Klovin, Miller, Fleeting & Klovin, 1988). Environmental factors associated with increased risk include living in poverty (Caspi et al. 2000; Webster-Stratton & Hammond, 1998), overcrowded or poor quality housing, having parents with low-levels of educational qualifications, being of single status or criminal background (Farrington, 1992). Specific parental risk-factors include poor parenting skills (Farrington, 1992; Webster-Stratton & Hammond, 1998) and high-levels of parental depression and stress (Keirnan & Mensah, 2009; Livingston, Takeuchi & Leaf, 1991; Mensah & Keirnan, 2010). Families living in disadvantaged areas are particularly vulnerable when it comes to parenting style, with multiple risks and stressors contributing to the disruption of positive parenting practices (Conger, Ge, Elder, Lorenz and Simons, 1994; Ghate & Hazel, 2002).

Developmental Trajectory of Childhood Conduct Problems

Childhood conduct problems are often preceded by non-compliance and poor emotion regulation (Broidy et al. 2003) or limited linguistic skills (Hart and Risley, 1992). Children displaying early signs of CCP, who do not receive an effective intervention often continue along a developmental pathway from childhood conduct problems to conduct disorder and subsequent antisocial behaviour, criminality and long term mental health problems as adults (Patterson, Forgatch, Yoerger & Stoolmiller, 1998).

Conduct disordered children have difficulties interacting with peers and concentrating in school and consequently have low levels of educational attainment (Kazdin, 1987; Webster-Stratton & Lindsay, 1999). Into adulthood, childhood conduct problems are associated with poor employment prospects and/or unemployment (Duncan, Ziol-Guest & Kalil, 2010; Fergusson, Horwood, & Ridder,

2004), drug and alcohol abuse, criminal activity, and persistent patterns of antisocial-behaviour (Farrington, 1995; Patterson, Debaryshe & Ramsey, 1989; Patterson & Forgatch, 1995).

Cost to Society

The cost to society incurred as a result of additional service use such as incarceration in young offenders institutions and prisons or the use of mental health services is large, with the estimated life-time cost to society of a child with early behavioural difficulties around ten times higher than normal (Romeo, Knapp & Scott, 2006; Scott, Knapp, Henderson & Maughan, 2001; The Police Foundation, 2010). The United Kingdom, and Wales in particular are experiencing significant cuts in public spending under the newly appointed coalition government, and the reduction of such costs is a key concern for Government.

Parenting is key

The treatment for childhood conduct disorder as recommended by the National Institute for Health and Clinical Excellence (NICE) is group-based parent training (NICE, 2006). A positive, nurturing relationship between parent and child is key to a child's development and emotional stability, with core activities such as parent-child play having positive benefits, particularly for children displaying behavioural problems (Gardner, Ward, Burton & Wilson, 2003). The emergence and maintenance of behavioural difficulties are frequent when parenting style is harsh, critical and coercive (O'Connor & Scott, 2006; Patterson, 1982; Reid & Patterson, 1989; Webster-Stratton & Hammond 1998) or when levels or monitoring child activity is low (Patterson & Stouthamer-Loeber, 1984; Reid & Patterson, 1989). With rising

levels of antisocial behaviour, the UK government views the role of parents as a key concern for all members of society, recently commissioned an independent review of early intervention (Allen 2011a; 2011b), and is continuing its investment in parenting (Paterson, 2011).

UK Government and trial context

The current research was made possible not only by the Welsh Government's (WG) continued investment in services for children and families, but also their recognition of the need for evidence based programmes and that these should be implemented in Wales.

In 1997, under a new labour Government, the well-being of our children and efforts to improve their outcomes became of key concern. Emerging evidence suggested the formative nature of the early years of a child's life, not only in terms of experiences, but also influencing physical brain development (Allen, 2011). Evidence indicated increasing disparities between the well-being and achievements of children from high and low socioeconomic circumstances (Feinstein, 2003) and the intergenerational cycles of underachievement for significant numbers in deprived communities (Allen & Duncan-Smith, 2009). This prompted the UK Government to channel their investment in human capital primarily into economically disadvantaged areas, and this was done through the flagship initiative, Sure Start (SS), along with the addition of a strong commitment to reduce the incidence of child poverty by 2020. Chapter five introduces the Sure Start initiative further and discusses some of the issues surrounding its evaluation, uptake, successes and failures in Wales and the UK.

In 2005, Wales saw the launch of the Parenting Action Plan (Department for Training and Education: DfTE, 2005;). This documented the intended actions of the

Welsh Government in relation to child well-being and parenting in Wales. The Welsh Government's children and youth support fund, known as 'Cymorth', was to be spent on universal services in deprived communities, with spending overseen by the local children's and young peoples partnerships (Department for Training and Education: DfTE, 2005). One aspect of the Parenting Action Plan was a commitment to fund training for staff to deliver the Incredible Years (IY) group Parenting Programmes (Webster-Stratton, 1998). The Welsh Government have continued their commitment to reducing child poverty and improving child well-being, most notably through the introduction of the Children's and Families Measure: a law that came into effect in 2010, requiring the Welsh Government to have a Child Poverty Strategy and to keep it under review (Welsh Government, 2010). To support this the Children and Young Peoples Well-being Monitor for Wales (Welsh Government, 2008) was published. This is a tool to be used to evaluate their progress.

Since the launch of the PAP (Department for Training and Education: DfTE, 2005) the Welsh Government have continued to fund training across Wales for staff to deliver the IY parent programmes. In addition Cymorth funding was used for the new Flying Start (FS) initiative. The current research was funded by the Welsh Government, and conducted and evaluated within the context of the Flying Start initiative.

Flying Start

The Welsh Government implemented the Flying Start initiative in 2007 as part of their seven core objectives for children and young people in Wales, (Welsh Government, 2007). It was introduced in designated areas across all 22 authorities in

Wales. These catchment areas encompass approximately 25,000 0-3 year olds, (Prabhakar, Thompson & McCrindle, 2008).

Flying Start area identification

Flying Start areas were based on school catchment areas and identified as being the most deprived areas across Wales. They were to be geographically small, with high-numbers of families with young children residing in them. Areas were selected based on a combination of the levels of deprivation in the area according to the Welsh Index of Multiple Deprivation (Welsh Government, 2005) and level of free school meal entitlement in the school catchment area

The Welsh Index of Multiple Deprivation combines eight separate indices of deprivation to form an index of multiple deprivation. Deprivation is considered to be a lack of opportunity and resources, not just a deficit of money. Indices of employment and income were considered to be the most indicative of deprivation, and as such carry a greater weighting than the indices of housing, access to services, education, health, community safety and physical environment (Welsh Government, 2008). Each Low Level Super Output Area (LLSOA) in Wales was assigned a deprivation score across each index. These were then combined to form a total deprivation score. The higher the deprivation score, the more deprived the Low Level Super Output Area was deemed to be.

Ranking on the Welsh Index of Multiple Deprivation (Welsh Government, 2008) was combined with information on free school meal catchment area to define the final Flying Start areas. Areas needed to have schools with more than 45% of children in their catchment area qualifying for free school meal. Free school meal entitlement has shown a consistent relationship with academic achievement, with

increased levels of free school meal associated with poorer academic achievement (Office of National Statistics, 2007; Statistics Wales, 2009;).

Wales falls below the average poverty levels for the UK as a whole so it was expected that Flying Start areas would have very high levels of deprivation on all eight of the indexes incorporated into the Welsh Index of Multiple Deprivation. Baseline data gathered by the National Evaluation of Flying Start supports this in all indices apart from the access to services index, where Flying Start families had increased access to services compared to Wales as a whole (Prabhakar et al. 2008). However, even if service provision is greater in these areas they may be predominantly used by families with lesser needs for services as was demonstrated in the large-scale evaluation of Sure Start in England (Belsky, Barnes & Melhuish, 2007).

Flying Start Aims

The Welsh Government have set clear short- and long-term objectives for the Flying Start scheme that are being evaluated by a consortium led by SQW Consulting and Ipsos MORI, who provide research analysis services. Short-term benefits are expected to include early identification of the needs of families, reductions in child protection referrals, and avoidance of children coming into the care system and of families requiring crisis remedies such as Youth Offending and Substance abuse services, (Welsh Government, 2009). The longer term goals include a reduction in the number of people with poor basic skills living in Flying Start areas, a reduction in the number of people involved in criminal activity, substance abuse and truancy from school and finally, higher levels of academic achievement, improved levels of employment and increased incomes (Welsh Government, 2009).

Flying Start Delivery Process

The Welsh Government stipulated that delivery of the Flying Start provision should be achieved through collaborative working between education, childcare and health and social services, to ensure that objectives are met. In addition, Flying Start aims to enhance facilities within communities by ensuring continued capital expenditure on the improvement of premises where services are delivered, to include children's centres and/or community rooms in schools where Flying Start crèches are housed.

Components of the Flying Start initiative

The Flying Start initiative has four main components: free high-quality childcare for children aged 2-3 years, increased visits from a dedicated Flying Start Health Visitor, access to free parenting programmes and free language and play schemes to enhance basic skills. These services are offered universally to *all* parents of children between the ages of 0-3 who live in Flying Start areas with an allocation of £2k per child per annum (See below for a full discussion of the four Flying Start elements).

Childcare

The provision of free childcare for 2-3 year olds within Flying Start catchment areas is the 'centrepiece' of the Flying Start provision (Welsh Government, 2009). Children are eligible to attend 2.5 hours a day, for one full term between their 2nd and third birthday. Expected benefits of the childcare provision include enhanced language skills, improved educational outcomes and that children will be more prepared and co-operative at the point of school entry. Previous research has demonstrated that children who have experience of high quality pre-school childcare have improved

cognitive abilities compared to children who have not attended such provisions, and these improvements are greater with low SES families, (Melhuish, Siraj-Blatchford & Elliot, 2003; Sammons, Taggart, Smees, Sylva). It is however worth noting that providing children with intensive childcare alone did not lead to sustained cognitive improvements, as was demonstrated by early research into the Head Start initiative in the US which demonstrated the need to provide such facilities for children but also to provide direct support to their families (Currie & Thomas, 1995; Zeigler & Valentine, 1979).

The Welsh Government have set clear guidelines as to what constitutes a good childcare setting (Welsh Government, 2009) as well as guidelines about the quality of venue in which the childcare is provided. A range of people/organisations can deliver Flying Start childcare, provided they are able to meet the minimum standards set by Flying Start and the Welsh Government. The childcare is to be delivered by highly qualified motivated staff. Children are to lead play, with plenty of opportunities for exploration, confidence building, risk taking and creativity, all within a language rich environment. Childcare providers are to liaise closely with parents, ensuring they are involved in discussions about their child, as well as to take opportunities to signpost parents to the other elements of the Flying Start scheme. Childcare providers should operate a 1:4 ratio of staff to children, with each child having 2.8 M^2 of space indoors, with the anticipation that this space should allow creative play as well as space for reflection and reading. Outdoor play space is also a requirement. The main focus of the childcare provision should be quality; quality staffing, quality venues and quality provisions.

Staff are expected to screen children for developmental delay and special learning requirements, work closely with Flying Start staff from other disciplines such as Health Visitors (HV) as well as emphasise to parents the important role that they play in teaching their children in the home environment.

Health Visiting Programme

The Welsh Government funding required designated Flying Start Health Visitors in each authority in addition to existing Health Visitors. Their role is to provide additional support to families as a result of their reduced caseloads (<110 families per Flying Start Health Visitor, as opposed to a caseload of up to 500 families per generic Health Visitor in some areas of the UK). They also carry out a full assessment of the needs of the whole family, paying particular attention to the needs of vulnerable families such as first time parents, single mothers and teenage mothers. Previous research has demonstrated improved outcomes for high-risk families across several outcome measures as a result of increased levels of home visiting by nurses including reductions in accidents in the home and in child protection referrals (Olds, Henderson & Kitzman, 1994) as well as reduced participation in criminal activities and substance abuse (Olds et al. 1998).

Health Visitors are required to carry out Developmental Screening Assessments using the Schedule of Growing Skills II (SGS II; Bellman, Lingam, & Aukett, 2008) on all children on or around their 2nd and 3rd birthday, to identify any special needs, and instigate links with appropriate services for additional support. The current research study also uses the SGS II (see Appendix G). In addition, they promote public health by advising parents on things like exercise, nutrition,

immunisation and parental mental health, (Welsh Government, 2009) and utilise their unique ability to engage with families (Belsky, Barnes & Melhuish, 2007) to promote all elements of the Flying Start initiative.

Language and Play/ Basic Skills

Language and Play provision was already in place in each local authority and funded by the Welsh Government before the introduction of Flying Start. The aim of the Language and Play/Basic skills (L&P/BS) element is to reduce the number of people living in Welsh communities with poor literacy and numeracy skills with each local Authority in Wales having a designated L&P Officer.

The Language and Play/Basic skills programme is a six-week intervention for parents of 0-3 year olds focussing on encouraging parents and children to learn through playing together, with a strong focus on communication coaching. A key take-home message for parents is that they are their child's personal teacher. The important role a parent can play in their child's development is highlighted and parents are encouraged to be active participants in their children's education. Parents are supported by L&P/BS staff as they try new activities with their children, with the core of the programme focussing on language, singing, reading and writing, and ways in which these activities can be incorporated into everyday routines.

Parenting Programmes

A review of appropriate parenting programmes was undertaken by 'Communities that Care' on behalf of Welsh Government (Welsh Government, 2009). This identified parenting programmes that were currently available and that were suitable for delivery within Flying Start areas. Inclusion on the list of parenting programmes was

dependent upon the programme having a sound evidence base, preferably by RCT, which demonstrated changes in parent and child (not just a programme that parents found enjoyable). Delivery of the programme should be via an interactive teaching method, training and supervision should be readily available for staff to deliver programmes to a high standard and finally the programme should be 'manualised', to promote programme adherence.

The programmes that were deemed most suitable for funding within Flying Start areas were the IY Parenting Programme (Webster- Stratton, 2008; 2011b), Handling Children's Behaviour (TDC Training and Development, December 2011) and Parenting Positively (Sutton, 2006). Of these three only the IY Parenting Programme meets the stringent criteria required for inclusion in the Blueprints for Violent Prevention status.

The next chapter of this thesis will outline the Incredible Years Toddler Parenting Programme (IYTPP: Webster-Stratton, 2008), the programme that has been evaluated for the current research project.

CHAPTER 2

THE INCREDIBLE YEARS TODDLER PARENTING INTERVENTION

The Incredible Years Toddler Parenting Intervention

Introduction

This chapter introduces the Incredible Years (IY) series and describes the existing evidence based for the well-established IY programmes. It then introduce the newly developed IY Toddler Parenting Programme, its content, the underpinning social learning theory principles, mechanisms of programme delivery, administration and certification.

History

The Incredible Years Toddler Parenting Programme (IYTPP) is part of a series of programmes for parents, children and teachers that have been developed over 30 years in Seattle by Dr. Carolyn Webster-Stratton (Webster-Stratton, 2011b). The Incredible Years series was originally developed as a clinic based treatment for children with child conduct disorder but has since been expanded to provide comprehensive training programmes for children, parents and teachers in behaviour management strategies from birth through to adolescence for both the reduction and prevention of conduct disorder (Webster-Stratton, 1989; 1990, 2008).

Programmes underpinning principle of Social Learning Theory

The Incredible Years series use the underpinning principles of social learning theory (Bandura, 1977). Social learning techniques, when used in parent training programmes, involve the reinforcement of socially desirable child behaviours with the aim of increasing their frequency, while problem behaviours that are not reinforced will decrease. The same principles are used by group leaders to support changes in parenting behaviour. There is ample evidence of the effectiveness of social learning theory techniques in parent training programmes (McMahon, Forehand & Greist,

1981; Webster-Stratton & Hancock, 1998). In addition to teaching social learning techniques to parent, the principles of praising and encouraging positive and socially desirable behaviours are modelled by group leaders throughout the course, for example praising parents for their contribution to discussion, time-keeping and home-work completion (Webster-Stratton, 2008).

The Evidence-Base

The Incredible Years (IY) parent programmes have strong evidence of effectiveness (Webster-Stratton, Mihalic, Fagan, Arnold, Taylor & Tingley, 2001) and are one of only eleven recognised Blueprints for Violence Prevention status (Webster-Stratton et al., 2001). The IY series has been extensively researched by both the developer and independent researchers using rigorous randomised control trial (RCT) designs and their effectiveness with clinical samples has demonstrated significant reductions in child conduct problems and improved parenting practices (Hutchings et al. 2007; Larsson, Fossum, Clifford, Drugli, Handegard & Mørch, 2008; Patterson, Barlow, Mockford, Klimes, Pyper & Stewart-Brown, 2002; Reid, Webster-Stratton & Baydar, 2004; Scott, Spender, Doolan, Jacobs & Aspaland, 2001; Webster-Stratton, 1998). Attendance on the IY parent programmes has resulted in reductions in depression for parents (Barlow, Coren, Stewart-Brown, 2003; Hutchings et al. 2007) and foster carers (Bywater et al. 2010). It has also significantly reduced the symptoms of ADHD (Jones, Daley, Hutchings, Bywater & Eames, 2007; Jones, Daley, Hutchings, Bywater & Eames, 2008; Webster-Stratton, Reid & Beauchaine, 2011), been used effectively with ethnically diverse families, (Reid, Webster-Stratton & Beauchaine, 2001; Scott, O'Connor, Futh, Matias, Price & Doolan, 2010;) and shown promising effects when delivered to nursery workers (Bywater, Hutchings, Gridley & Jones, 2011). Programme effects with high-risk samples have also been

maintained over the longer-term (Bywater et al. 2009; Drugli, Larsson, Fossum & Mørch, 2009; Reid, Webster-Stratton & Hammond, 2003; Scott, 2005; Webster-Stratton, Rinaldi & Reid, 2010), (for more information, see www.incredibleyears.com).

There is clear evidence for the cost effectiveness of the IY parent training (Charles, Bywater & Edwards, 2011; Edwards, Ceilleachair, Bywater, Hughes & Hutchings, 2007; O'Neill, McGilloway, Donnelly, Bywater & Kelly, 2011; Scott, O'Connor & Futh, 2006).

The Incredible Years Series is identified as one of the Blueprints for Violence Prevention, a series of programmes that have a proven evidence base of effectiveness (Webster-Stratton, Mihalic, Fagan, Arnold, Taylor, & Tingley, 2001). The Centre for Violence Prevention at the University of Colorado were funded to identify Blueprint programmes that had gold-standard evidence of intervention effectiveness in the prevention of violence to enable governments and practitioners to select appropriate programmes that are both effective and cost-effective. Programmes are selected for inclusion in the Blueprints if they have a strong research design, have proven effectiveness, have been successfully researched across multiple sites and by independent researchers, have long-term significant outcomes and have been demonstrated to have tools for fidelity (Webster-Stratton et al. 2001). The IY programmes have been included on the list of programmes recommended by the Commissioners Toolkit (Children's Workforce Development Council, 2011) and the Welsh Government (2011b) and have been effectively incorporated into services in Wales (Hutchings & Bywater, 2011).

The IYTPP is a newly developed addition to the IY series for parents of one to three year old children. The IYTPP includes core components from the IY series, in

addition to age-appropriate modifications for children aged 1-3 years. The programme aims to provide parents with a toolkit of management techniques that will enable them to deal with challenging behaviours competently and sensitively, in addition to teaching coaching skills that will promote academic, social and emotional competence (Webster-Stratton, 2005). Programme goals include the reduction of aggressive and antisocial behaviour in children, increasing positive interactions between parents and children, and fostering child social and emotional competence and self-regulation to enable children to participate fully and reach their potential in life (www.incredibleyears.com).

The Eight Core Topics of the IYTPP

Child-directed play promotes positive relationships.

Early programme sessions encourage parents to play with children in ways that are imaginative and child-led and provide the opportunity for parent-child bonding, creativity, parental modelling of positive behaviours and the introduction of rules and techniques for ending play successfully. By giving children their full attention, parents are able appreciate and encourage the positive behaviours that they wish to increase.

Promoting toddler's language with child-directed coaching.

Parents are encouraged to model and prompt age appropriate language development. The programme introduces descriptive commenting and persistence coaching, exposing children to a greater breadth of language as well as introducing labels for their emotions, feelings and state of mind, against a backdrop of increasing child school readiness through academic coaching.

Coaching toddler's social and emotional competence.

This section of the programme builds upon the child's exposure to words that label and describe their emotions. Parents are encouraged to model, praise and encourage socially appropriate behaviours like sharing and turn taking whilst encouraging the generalisation of pro-social behaviours to peers and/or sibling interactions. There is a strong focus on the use positive words and other language, with children coached to talk about and label their emotions, with the hope that this will enable children to recognise and regulate their emotions.

The art of effective praise and encouragement.

Parents are taught the value and effectiveness of praise as a way of rewarding their child, and taught how effectively delivered, consistent praise can encourage appropriate behaviour. Parents are guided through the difficulties of giving praise to some children, and are encouraged to model the principles of praise and encouragement with other family members and self to promote social learning.

Spontaneous incentives for toddlers.

This section of the programme introduces the notion that spontaneous incentives, in addition to praise and encouragement, can be an effective way of modifying child behaviour with younger children. For this to be effective rewards must be tangible, immediate and contingent upon the child displaying the desired positive behaviours.

Handling separation and reunions with toddlers.

During the toddler years parents and children start to be separated from each other for differing lengths of time (for example a parent returns to work or child starts in a play-group). Parents are guided through the importance of making these separations and reunions predictable and consistent to avoid inducing anxiety in the child or the parent.

Positive discipline and effective limit setting.

Parents are introduced to the importance of child-proofing their home and the establishment of clear household rules. Parents discuss how to make their commands effective and simple, the importance of allowing children to explore their surroundings within a safe environment and the developmental benefits of doing this. Distraction and re-direct techniques are introduced along with tips to maximise their effectiveness. The importance of monitoring children at this young age and particularly for children who are easily distracted is also covered.

Positive discipline-handling misbehaviour.

The final part of the programme introduces methods of handling misbehaviour through ignoring and re-directing children and the use of proximal praise when dealing with more than one child. Parents discuss techniques for managing their own behaviour and emotions in situations where children are challenging, how best to deal with aggressive behaviours like hitting and biting in young children and techniques to help toddlers calm down.

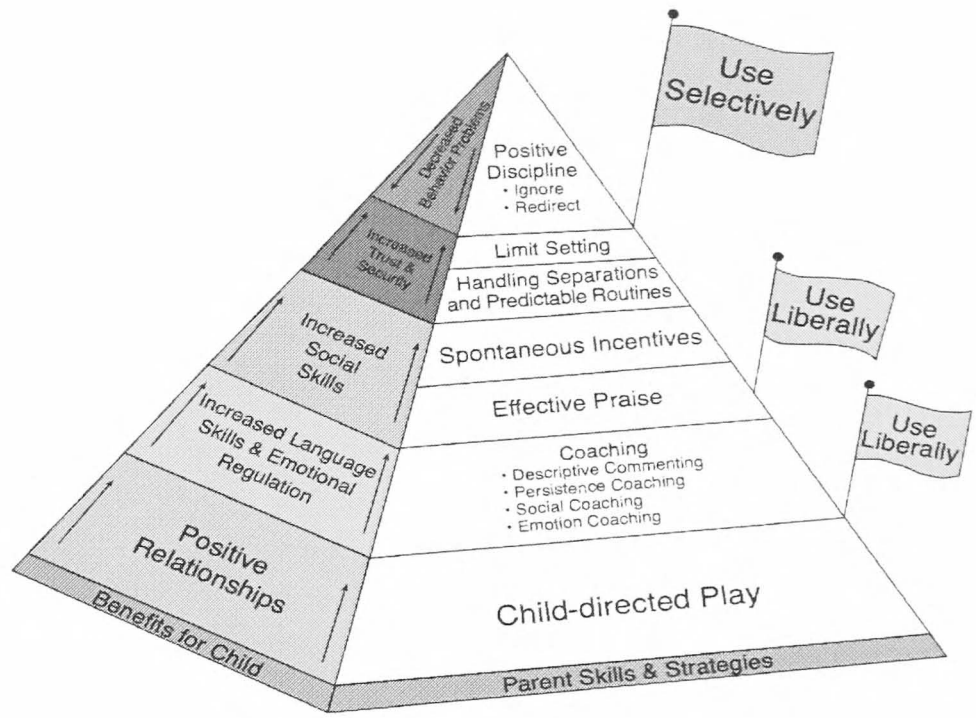
Alongside the eight core programme topics, parents are made aware of the key developmental milestones for children of this age, how they can promote child developmental advance through play and coaching and things that they can do to keep their children safe in the home by use of toddler proofing checklists. Key differences between the IY Basic programme and the IYTPP include: greater emphasis of coaching child skills in language and social-emotional domains; inclusion of age appropriate topics like handling separations and bedtime routines; the use of developmental milestone and safety checklists; removal of 'consequences' for unwanted behavior. Positive discipline strategies such as re-direction are a key

technique of managing child-behaviour in the IYTPP whereas consequences such as time-out are not appropriate for children of this age.

Delivery Method and Support for Parents

The IYTPP is a manualised programme developed for delivery over a 12-week period, with up to 14 parents/carers. Groups should be facilitated by two leaders with a strong focus on the use of collaborative learning processes with parents identifying their own issues and needs and brainstorming together to find solutions to their problems, enhancing self-esteem and ownership of skills taught. Core group activities include watching short video vignettes that prompt discussion, group role-play and homework-activities (Webster-Stratton, 2008). These group activities provide parents with the opportunity to rehearse newly acquired skills, and have been identified as key components of the more effective parent training programmes (Hutchings, Gardner & Lane, 2004). A central theme of the IY programmes is the pyramid (see figure 2.1). This is used as a visual guide to programme content, with parent-child play creating a firm base of the pyramid, highlighting to parents the importance of building strong bonds and relationships through play and how this can impact child self-esteem and competence (Webster-Stratton, 2005).

The IYTPP gives clear guidance on the resources needed to remove barriers to group attendance, including transportation, a convenient and welcoming locality, childcare and refreshments. In addition, parents are encouraged to 'buddy-up' with other parents for phone calls between groups to provide additional support to each other.



Parenting Pyramid
Toddlers (1 - 3 years)

Figure 2.1: The Parenting Pyramid for Toddlers (Webster-Stratton, 2008)

Administration/Certification of Group Leaders

To ensure adherence to programme content group leaders and co-leaders complete weekly checklists to monitor coverage of programme content. Trained group leaders are encouraged to attend supervision sessions that are facilitated by IY mentors or trainers. Leaders are also encouraged to attain certification, a process that involves successful review of a group session, the facilitation of two full IY programmes and a peer review of two parenting sessions.

Programme use in Wales

A recent review conducted by the Centre for Evidence Based Early Intervention and Bangor University found that the Incredible Years baby and toddler programmes were the most widely used of the Incredible Years series in Wales (Hutchings, Williams & Morgan-Lee, 2010). While, there is promising evidence of effectiveness of the IYTPP in Wales with Flying Start nursery workers (Bywater, et al. 2011) this is the first rigorous evaluation of the IYTPP with parents. This thesis aims to contribute to the evidence-base on the use of IYTPP within disadvantaged areas of Wales.

The next section of the thesis introduces the study protocol. The protocol details trial set-up, recruitment, assessment measures and procedures, followed by a review of developmental screening tools suitable for use in a community setting with young children.

CHAPTER 3

EVALUATING THE INCREDIBLE YEARS TODDLER PARENTING INTERVENTION: STUDY PROTOCOL

Introduction

This chapter explains the design and procedure of the randomised controlled trial that evaluated the Incredible Years toddler parent programme in Wales. This section outlines the recruitment procedures, trial set up and funding, measures used and the rationale for their selection, home visit structure and study design. An extended version of this protocol was published by the Incredible Years Wales. Bangor University (ISBN 978-1-84220-126-8).

Aim

The study aim was to evaluate the newly developed twelve-session Incredible Years Toddler Parenting intervention for parents of toddlers aged 12 to 36 months (Webster-Stratton, 2008). The interventions aims are the promotion of positive parenting practices and encouraging child developmental advance, reducing the risk of children developing early behavioural and emotional problems that are often the precursors of significant child mental health problems including Conduct Disorder (CD).

Funding

The project was funded by:

a) a grant from the Welsh Assembly Government of £114k, to provide for a full time research officer and part-time administrative support for 18 months, for which Professor Hutchings is the Principal Investigator,

b) a Welsh Language Board funded PhD scholarship (awarded by the Coleg Cymraeg Cenedlaethol) and

c) grant funding from Incredible Years Cymru, Charity for additional research assistant support to enable longer term data collection.

Funding Time Scale: October 2007 to September 2010

Objective:

To undertake a randomised controlled trial evaluation of the Incredible Years Toddler Parenting Programme in six or more Flying Start areas across Wales. Flying Start is an early-years programme introduced by the Welsh Government (WG) to enhance the life outcomes of children, from birth to three years, living in disadvantaged areas across Wales. Areas designated by the Welsh Government were based on primary school catchment areas where schools have over 45% of children entitled to free school meals. Flying Start funding provides £2000 per annum for every child, from birth to three years of age. Flying Start service providers deliver four interventions: intensive health visiting from a dedicated Flying Start health visitor with a significantly reduced caseload, basic skills training for parents in language and play sessions, with each authority funded for a language and play co-ordinator, free nursery provision for all children aged two and over and parenting support (see chapter 2 for a full description)

Rationale for Study

A wealth of research evidence has demonstrated that the parent and child characteristics that predict future behavioural problems can be identified when children are as young as six months old (Bates, Bayles, Bennett, Ridge, & Brown, 1991). Furthermore developmentally maladaptive behaviour can be reliably identified by age two and such behaviour problems are far more persistent than previously thought (Rose, Rose, & Feldman 1989; Sroufe, Egeland, & Kreutzer, 1990; Weinfield, Sroufe, & Egeland, 2000). The circumstances and environment into which children are born have a powerful impact on their development (Rutter, Gille, &

Hagell, 1998) and children living in deprived neighbourhoods, such as those identified as Flying Start areas, are at substantially increased risk of emotional and behavioural difficulties (Caspi, Taylor, Moffitt, & Plomin, 2000). Stressful environments affect parents and, for some, their capacity to care for their children is, in turn, compromised (Sampson, 1997).

The first three years of life are a period of remarkably rapid growth and development (Greenough, Black, & Wallace, 1987; National Research Council and Institute of Medicine, 2000). The importance of the child's early environment for supporting this development is well established (e.g., Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000; Holden, 1997). For babies and very young children the developing relationship and bond with their parents and main carers is especially important. There are particular risks relating to family and parenthood in the first two years. These include maternal postnatal depression (Murray, Cooper, Wilson, & Romaniuk, 2003), impaired bonding/insecure attachment of children to their parents and impairments in maternal responsiveness towards the child (Campbell, Cohn, & Myers, 1995).

Early stimulation and social interaction are two of the most important components of a child's early environment. A home environment rich in social, emotional, and cognitive support is positively associated with a host of positive developmental outcomes including security of mother–child attachment (Jacobson & Frye, 1991) and social adjustment (Erickson, Sroufe, & Egeland, 1985). In addition, positive maternal involvement is associated with reduced problem behavior (Gardner, 1994; Shaw & Vondra, 1995) as well as lower levels of expressed anger and sadness in preschool

(Morris, 2000). Conversely, poor quality of parenting and parent–child interaction are related to unfavorable attachment and poor social adjustment (Collins et al., 2000; Holden, 1997). For example, low maternal sensitivity, warmth and emotional availability are related to children's insecure attachment (De Wolff & Van Ijzendoorn, 1997; Goldsmith & Alansky, 1987), poor subsequent adjustment/problem behavior (Campbell, 1997), and lower school readiness (Connell & Prinz, 2002).

Because of the beneficial effects of positive early experience and environment on child development, interventions for young children and their families can increase the chances of favorable developmental outcomes for high-risk children. However since the shift in political interest from cure to prevention is relatively new, there is little high-quality research in this area.

The Incredible Years (IY) BASIC Parent Programme has a substantial evidence base for the prevention and reduction of CD for children aged 3 – 8 (Hutchings, Bywater, Daley, Gardner, Whitaker, et al., 2007; Scott, Spender, Doolan, Jacobs, & Aspland, 2001; Webster-Stratton, 1998; Webster-Stratton, Reid, & Hammond, 2004). The strong evidence of effectiveness of the IY programme with high-risk 3- and 4-year-old children in North & Mid Wales Sure Start areas (Hutchings et al., 2007) prompted the Welsh Government (WG) to fund group leader training across Wales (Department for Training and Education: DfTE, 2005) and to specify the IY Toddler Parent Programme as appropriate for parents in Flying Start areas (see also chapter 2 for a full description of programme content, evidence base and delivery format).

The IY toddler parent programme

The IY Toddler Parenting programme was developed by Webster-Stratton (2008) and incorporates all of the key components demonstrated to have been effective in the IY programmes for parents of older children. The programme covers eight topics delivered over 12-weeks in two to two-and-a-half hour sessions that introduce parents to a set of key parenting skills (see Chapter 2 for a full description of the Incredible Years Toddler parenting programme).

The current research project is the first randomised controlled trial (RCT) evaluation of the Toddler programme as this is a new programme and to date the programme has no published evidence-base. The current trial will establish an evidence base for the programme with parents of one and two year olds living in socio-economically deprived areas across Wales.

Overview of Evaluation Method

Participants

The project initially aimed to recruit 108 dyads across 6 sites to participate in the trial.

To be eligible to participate, families were required to meet following criteria:

Inclusion Criteria:

- Child aged 12 – 36 months at recruitment
- Parent and child must live within a designated Flying Start area in Wales

Exclusion Criteria:

Families not to have been on an IY parenting programme in the past (e.g. for a sibling)

Recruitment procedure:

- Families were recruited by group leaders in the Flying Start areas where the groups would be running.
- Group leaders were instructed to recruit parents of children that would benefit from attending a parenting course, parents and children were not assessed on any additional measures before inclusion.

Final Numbers:

- In total, 103 parent-child dyads were recruited across 9 sites across North, Mid and South Wales. Fourteen of these parent-child dyads were not included in the final analysis, as they had failed to meet the full inclusion criteria. This error arose as the local group leader recruited families that were not living within the designated Flying Start area, and as the aim of the project was to evaluate the effectiveness of a parenting programme being delivered as part of the four Flying Start components, the decision was taken to exclude these families from any further analysis, leaving the trial with a total of 89 parent-child dyads.

Study Design

Allocation to groups

- Participants were randomly allocated on a 2:1 ratio to receive the parent training intervention or go to a waiting list control group using a remote dynamic allocation randomisation service provided by the North Wales

Organisation for Randomised Trials (NWORTH). Families were stratified for sex (male/female), age group (under two years/two and over) and centre to ensure a good balance of these features between the two arms of the trial. Allocation occurred after all baseline measures had been collected.

Assessment points

- All families were assessed at baseline
- Immediately after baseline assessment families were allocated into groups
- Intervention families were offered a place on a 12- week parenting group in their immediate local areas as soon as allocation occurred
- Six months post baseline (during which period the intervention takes place) all participants were reassessed
- Following six-month assessments all parents originally allocated to waiting-list control were offered the IY Toddler programme or equivalent course. As previous research had demonstrated significant benefits to families living in disadvantaged areas, it was deemed unethical to withhold intervention for a further six-months for this group.
- Twelve months post-baseline intervention families completed another round of assessments, no comparison data were collected at 12-months post baseline.

For a full description of the procedure see Appendix A.

Timetable

Due to the large geographical area being covered and the multiple data collection points, the trial was conducted in two phases. Recruitment in North Wales took place in August 2008 with the first intervention being delivered in September. Recruitment in South Wales took place in November 2008 with interventions commencing in January 2009, (see Appendix B for trial timetable).

Analysis strategy

Exploratory data analysis was conducted on data, assessing normality and a thorough exploration of baseline data was conducted (see Chapter 5 for a full description of baseline data). Repeated measures analysis of covariance (ANCOVA) and clinically significant change indices were used to investigate the efficacy of intervention on the whole sample (Chapter 6) and for longer-term improvements for trial completers (Chapter 7).

Assessment Battery

The assessment battery was compiled as the result of a detailed literature search. The battery of measures was selected to match the objectives of the IY Toddler parenting programme, which is to promote child development, and collect information regarding the potential risk factors to child development. Appendix C contains a list of all measures.

In order to explore a range of outcomes, the following domains were explored: child developmental status; quality of parent-child interaction; parental mental health; parenting competencies; quality of child's home environment.

Participant characteristics were assessed using a combination of assessment techniques, including direct assessment of child developmental level, direct observation of the interaction between parent and child, parent reported level of mental wellbeing or depression and parent perceptions of their parenting role. In addition, a large amount of demographic information was collected.

Full details of the battery of measures are included below.

Demographics

***Personal Data and Health Questionnaire* (PDHQ; Hutchings, 1996)**

The PDHQ is a semi-structured interview based on the work of Herbert (Herbert, 1993), and is used to obtain basic socio-demographic and general health data on family members. The interview is conducted with the primary carer, typically the mother, and covers aspects of the child's health and development, including birth complications, mother's health during pregnancy and birth. The PDHQ also includes questions about other members of the household, assesses the quality of parent relationships (if applicable), quality of housing, income, and level of primary carer's education.

Rationale for use

The literature suggests that the risk of a child developing conduct problems is increased by the prevalence of a variety of family factors, including disturbances in family and marital functioning (Johnston & Mash, 2001). The inclusion of this measure serves several important functions. It provides data for assessment of

whether intervention and control groups are matched on key socio-economic variables that can also be used in subsequent moderator analysis. It provides a quantitative score of the key disadvantaging circumstances associated with the development of child behavioural problems. It also provides an opportunity to establish rapport with the parent, and for the parent to mention any matters concerning their child prior to being asked to complete the subsequent battery of questionnaires. It has been used in a number of studies, including the RCT of the IY Basic parent programme with parents of three and four year old children (Hutchings et al., 2007) and the IY foster carer study (Bywater et al., 2010).

Administration

The PDHQ is a semi-structured interview administered by the researcher with the mother/primary carer. It takes approximately 15 minutes to administer. A copy is included in Appendix D.

The full assessment is only administered at baseline. At follow-up data collection points a shortened version, assessing any change in circumstances, is administered (follow-up demographics).

***Socio-economic Disadvantage* (SED6; Hutchings, 1996)**

Data for the SED6 is derived from answers provided on the PDHQ. The SED6 is designed to assess matters concerning family socio-economic status. Six socio-economic risk factors are measured: employment status, marital status, number of children, maternal education, housing, and area of residence (high/low crime); these

were selected based on the findings of Dumas and Wahler (1983) and Rutter and Quinton (1977).

Scoring

Based on the answers provided to the PDHQ, the six SED6[§] factors are coded as follows:

- Employment status of primary provider: employed = 0, dependent on benefits = 1
- Marital status: married / cohabiting = 0; single parent = 1
- Number of children: Small family size = 0, large family size = 1 (based on the findings of Brown & Harris (1978), three or more children represent large family size).
- Maternal education: education up to sixteen = 1, education beyond 16 = 0
- Housing circumstances: poor quality/overcrowded/insecure = 1 (this rating is made on the basis of responses given by the primary caregiver in the interview, and the researchers observations).
- Area of residence: high crime = 1, low crime = 0. Area level of crime was established by entering every household postcode into the England and Wales local crime and policing website. The website contains a crime mapping facility, where local areas are categorised in the following way:

Table 3.1

Definition of crime level by percentage

% Crime	Category
Top 2% of areas with highest crime	High Crime
Next 14% of areas	Above average crime
Middle 68% of areas	Average crime level
Next 14% of areas	Below average crime
Bottom 2% of areas with lowest crime	Low crime level

Data retrieved from http://www.police.uk/crime/

§ In chapter 7 the SED5 is used. This was done to avoid overinflating numbers who were at high risk (> 2 risks on this measure)

The Schedule of Growing Skills II **(SGS II; Bellman, Lingam & Aukett, 1996)**

The SGSII is a developmental screening procedure designed for use by health visitors, general practitioners, paediatricians and other professionals involved in care of young children from birth to five years old (see Appendix G). The Welsh Government had selected the SGS as a screening tool to be administered to all children living in designated Flying Start areas on their 2nd and 3rd birthday. Consequently, it was a requirement that we used the same measure in the study as the developmental outcome measure.

The measure is divided into five broad developmental fields, and then into various sub-fields:

Field 1: Posture and large movements

Sub fields: passive postural skills (for babies only)

Active postural skills

Locomotor skills

Field 2: Vision and fine movements

Sub fields: Manipulative skills

Visual skills

Field 3: Hearing and speech

Sub fields: Hearing and language skills

Speech and language skills

Field 4: Social behaviour and play

Sub fields: Interactive social skills

Self care social skills

Field 5: Cognitive

Rationale for use

To examine whether the intervention impacts on child development.

Administration

The SGS II test kit contains 187 standardised test items, which are used interchangeably to assess competence across the 9 subcategories. All assessments were conducted in the home by a certified test administrator, and wherever possible, sat at a table. Test items in each subscale begin with basic items and increase in

complexity as you move down the scale, and to reduce the effects of fatigue test administrators would estimate the testing start position based on child age. Testing took between 20 and 40 minutes per child, with scoring and profiling taking another 10-15 minutes.

Scoring

The standard method of scoring test performance involved taking the highest-ranking item that the child performed on each sub-field and mapping this onto the profile form. The decision was taken to validate a new scoring method that computes a developmental quotient for each child, details of which can be found in Williams (2010). The new scoring method involved summing only the items that a child *had* passed, which avoided overestimating the child's capabilities.

Reliability and validity

From a sample of 348 children aged between birth and five years, Cronbach's alpha coefficients were calculated for each of the ten subscales. These ranged from .61 to .97 depending on the subscale being measured. The SGSII has also shown good concurrent validity when compared with the Denver Developmental Screening Test II (DDST; Frankenberg, Fabdal, Sciarillo & Burgess, 1981).

The SGS II has several limitations that need to be addressed. Firstly, the developmental windows on the record form vary in width, from two-month during the first year of life, to 12-months by age three years. This could mean that it is not sensitive to developmental change. Secondly, as described above, the highest-ranking item on each subscale is taken as the child's score, resulting in a potentially

unrealistic representation of the developmental trajectory of a child. Lastly, the concurrent validity data could be considered as flawed since the DDST has been found to have low detection rates (Sonnander, 2000, Glascoe, 2005) and a sample of only 15 children were used to determine the concurrent validity.

Parenting Competencies

Parental Sense of Competence (PSoC; Johnston & Mash 1989)

The PSoC contains 17 items developed to assess parenting self-esteem. The measure has two subscales, related to parent satisfaction (e.g., *A difficult problem in being a parent is not knowing whether you're doing a good job or a bad one)*, and parent self-efficacy (e.g., *Being a parent is manageable, and any problems are easily solved).* Items are rated on a 5-point scale ranging from *strongly agree* (5) to *strongly disagree* (1) (see Appendix F).

Rationale for use

Both parenting self-efficacy and parenting satisfaction function as a moderator of parent-child relationships. Previous research has demonstrated that caregivers with low levels of perceived control over their children's behaviour cope ineffectively with difficult child behaviour, and benefit form additional parenting support.

Administration

The scale is self-administered and takes approximately 10 minutes to complete.

Scoring

Scoring for Items 2, 3, 5, 7, 8, 9, 12, 14 and 15 is reversed in order that higher scores from all items indicate greater self-esteem. Once reversed, the items are then summed into one of two subscales, with Item 17 being the only item that does not fit into a sub-scale.

Items summed for Efficacy Subscale: 1, 4, 6, 10, 11, 13 and 16

Items summed for Satisfaction Subscale: 2, 3, 5, 7, 8, 9, 12, 14 and 15.

Possible Score for Total Parent Competence: 17-85

Possible Score for Efficacy Subscale: 7-35

Possible Score for Satisfaction Subscale: 9-45

Interpretation

The scores are summed (after reverse scoring the above items), to obtain a total score. A higher score indicates greater parenting competence.

Reliability and Validity

In a normative study of 297 mothers and 215 fathers of 4- to 9-year-old boys (Johnston & Mash, 1989), Cronbach's alpha coefficients were calculated for the total score and for each factor. For the entire sample, the total score (16 items) revealed an alpha of .79; the satisfaction factor (9 items) yielded an alpha of .75; and the Efficacy factor (7 items) revealed an alpha of .76. For the entire sample, the total PSoC score was significantly negatively correlated with both the Internalising and Externalising subscales of the CBCL.

Parental Mental Health/Stress

***The Parenting Stress Index/short form* (PSI/SF; Abidin, 1990; 1995)**

This 36-item inventory measures the stress experienced by the respondent in relation to their role as a parent of a child up to the age of 12 years (see Appendix G). Abidin (1990) argued that the total stress a parent experiences is a function of specific prominent child characteristics, parental characteristics, and situational variables associated with the role of being a parent. In reflection of this model, the PSI/SF contains three test subscales: Parental Distress (PD), Parent-Child Dysfunctional Interaction (P-CDI), and Difficult Child (DC). The PD subscale indicates the distress a parent is experiencing in his or her parental role as a function of personal factors related to parenting. The associated component stressors include: an impaired sense of parenting competence; stressors associated with the restrictions put on other life roles; conflict with the child's other parent; lack of social support; and, presence of depression. A sample item would be: *I feel trapped by my responsibilities as a parent.* The P-CDI subscale focuses on the parent's perception that his or her child does not meet their expectations. In addition, the parent-child interaction is not found to be reinforcing to the parent. A sample item would be: *my child is not able to do as much as I expected.* The DC subscale measures the presence of basic behavioural characteristics that could make children either easy or difficult to manage. These focus on temperamental characteristics but also include learned patterns of defiant, non-compliant, and demanding behaviour. A sample item would be: *my child seems to cry or fuss more often than most children.* Answers to each item are given by circling a response on a five-item scale, ranging from 5 (strongly agree) to 1 (strongly disagree).

A Defensive Responding subscale (seven items from the PD subscale) is also included. Scores of below 10 on this scale render the test invalid, as such a low score can imply that the parent is trying to portray him or herself in a favourable light, rather than responding truthfully to the scale items.

Rationale for use

Research has suggested that the benefits of parent training can be compromised by high levels of parental stress and distress (Dumas & Wahler, 1983; Webster-Stratton, 1990). The PSI has often featured as an outcome measure in parenting intervention studies (e.g. Hutchings et al., 2007; Webster-Stratton & Hammond, 1997) and as a predictor of intervention non-attendance. In the current evaluation, the PSI is used as an outcome measure contributing towards the assessment of parental competence. It will also contribute towards analyses of potential moderators of treatment outcome.

Administration

The inventory is self-administered and takes approximately 10 minutes to complete.

Scoring

The first 12 items on the scale relate to the PD subscale, items 13-24 to the P-CDI subscale, and items 25-36 to the DC subscale. The items score of between 1 (strongly disagree) and 5 (strongly agree) is summed for each subscale. A Total Stress score is calculated by summing the scores from the three subscales. The Defensive subscale is scored by summing items 1, 2, 3, 7, 8, 9, and 11.

Normative Information

Abidin (1995) reports normative data from a sample of 800 mothers, with target children of 10-84 months in age (mean age = 43 months). Mean scores obtained for the PSI/SF were 25 for PD, 19 for P-CDI, 25 for DC, and 69 for Total Stress.

Interpretation

The normal range of scores for the PSI/SF fall between the 15th and 85th percentile ranges. Interpretation of the PSI/SF is based on clinical judgement and research using the PSI, however as a guide Abidin (1995) suggest the following:

- Total Stress: Scores of 86+ fall above the 85th percentile. Parents who obtain a total stress score of 90 or above are purported to be experiencing clinically significant levels of stress.
- PD: Scores of 33+ fall above the 85th percentile. When the PD subscale is the highest of the three subscale scores, it is advised that the parent's personal adjustment be explored, as in some cases these problems may be independent of the parent-child relationship.
- P-CDI: Scores of 26+ fall above the 85th percentile. A high score suggests that the parent-child bond is either threatened or has never been effectively established.
- DC: Scores of 33+ fall above the 85th percentile. Abidin suggests that, regardless of the cause of the problem, parents who score high on this scale may require specialist assistance. In combination with a high DC score, the pattern of scores from the other subscales will indicate the focus of the direction of the intervention.

Reliability and Validity

From a sample of 800 participants, Abidin reports good test-retest reliability for each subscale, and internal reliability coefficients from .80. In an independent validation study assessing data from 103 Head Start parents, Roggman, Moe, Hart, and Forthum (1994) reported PSI/SF alpha reliabilities of .78 to .90.

At the time of constructing the 1995 PSI manual, the PSI/SF did not have a body of independent research evidence to support its validity. However, Abidin argues that because it is a direct offshoot of the full-length PSI (and highly correlated at .94 for Total Stress), it is likely that it will also share the validity of the parent scale. The construct and predictive validity of the PSI have been examined through a multitude of studies. For example, in terms of convergent validity, Eyberg, Boggs, and Rodriquez (1992), report high correlation between the PSI domains of Parental Distress and Difficult Child, and ECBI Intensity and Problem scores, indicating that maternal stress covaries with child disruptive behaviour.

***Beck Depression Inventory II* (BDI; Beck, Ward, Steer & Brown, 1996)**

This is a 21-item inventory measuring the severity of depression, and is suitable for use with adults and adolescents aged 13 years and over (see Appendix H). Items on the measure have been compiled based on descriptions of the experiences of depression sufferers and are consistent with the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV: 1994) criteria for the diagnosis of depression.

Such attitudes and symptoms are reflected by the items, which are: sadness, pessimism, past failure, loss of pleasure, guilty feelings, punishment feelings, self-

dislike, self-criticalness, suicidal thoughts or wishes, crying, agitation, loss of interest, indecisiveness, worthlessness, loss of energy, changes in sleeping pattern, irritability, changes in appetite, concentration difficulty, tiredness or fatigue, loss of interest in sex. Each item contains four possible responses, which range in severity from 0 (e.g. *I do not feel sad)* to 3 (e.g. *I am so sad or unhappy that I can't stand it).* For each item, the respondent is required to select one statement that best describes the way that he or she has been feeling over the last two weeks including the day they are completing the measure.

Rationale for use

There are several reasons behind the inclusion of a measure of mental health like the BDI II in the current research. Attendance at parenting groups has been shown to reduce maternal depression (Hutchings et al. 2007). In addition, early maternal depression has been linked to delayed development in children (Murray & Cooper, 1997), difficulties with socio-emotional behaviour, (Maughan, Cicchetti, Toth & Rogosch, 2007) distorted perceptions of child behaviour problems and child conduct (Hutchings, Appleton, Smith, Lane & Nash, 2002; Webster-Stratton & Hammond, 1988), and tends to be higher in socially disadvantaged areas, like the Flying Start areas where the current research was conducted. Thus, the monitoring of maternal depression in this investigation is of particular salience, given the potential impact on treatment outcome and completion of parent training.

The inclusion of a measure of depression will provide data for attrition analysis and equivalency of intervention and control groups. Moreover, monitoring

depression levels over the course of the evaluation may provide data supporting the secondary benefits of parent training, that is, improvement in maternal mental health.

Administration

Respondents are required to provide answers based on the way they have been feeling over the past two weeks including the day they are completing the measure. The inventory is self-administered and takes approximately 10 minutes to complete.

Scoring

The scores from each of the 21 items are summed to generate a total score (minimum score = 0, maximum = 63). If more than one statement on an item has been circled, the highest scored statement is chosen.

Interpretation

The total score provides an index of overall severity of depression. By convention, total score levels of depression are interpreted in the following way:

- Score 0-13 = Minimal
- Score 14-19 = Mild depression
- Score 20-28 = Moderate depression
- Score 29-63 = Severe depression

Reliability and Validity

For the BDI-II the coefficient alphas (.92 for outpatients and .93 for the college students) were higher than those for the BDI- 1A (.8 6). The correlations for the corrected item-total were significant at .05 level (with a Bonferroni adjustment), for

both the outpatient and the college student samples. Test-retest reliability was studied using the responses of 26 outpatients who were tested at first and second therapy sessions one week apart. There was a correlation of .93. which was significant at $p < .001$. The mean scores of the first and second total scores were comparable with a paired $t(25)=1.08$, which was not significant (Beck, Ward, Steer and Brown. 1996).

***Warwick-Edinburgh Mental Well-being Scale* (WEMWBS; Tennant, Hiller, Fishwick, Platt, Joseph, Weich, Parkinson, Secker, & Stewart-Brown, 2007)**

The WEMWBS is a 14 item positively worded item scale with five response categories from 'none of the time' to 'all of the time' (see Appendix I). It has a time frame for assessment of the previous two weeks, which is consistent with DSM-IV criteria. The instrument covers most aspects of mental health currently in the literature, including both hedonic (subjective experience of happiness and life satisfaction) and eudaimonic (psychological functioning and self realisation) perspectives: positive affect (feelings of optimism, cheerfulness, relaxation), satisfying interpersonal relationships and positive functioning (energy, clear thinking, self acceptance, personal development, mastery, and autonomy). It does not include items specifically on life satisfaction, but hedonic well-being is well represented. Items are summed to give an overall score that can be presented as a mean score or graphically

Rationale for use

The co-occurrence of maternal depression and child disruptive behaviour is well documented. Although pre-treatment levels of maternal depression have been found to be significantly related to poor outcomes in parent training intervention (Forehand,

Furey, & McMahon, 1984), there is also evidence to suggest that levels of depression in mothers of children with conduct problems may decrease following parent training intervention (Hutchings, Appleton, Smith, Lane, & Nash, 2002; Webster-Stratton & Spitzer, 1996). Thus, the monitoring of maternal depression in this investigation is of particular salience, given the potential impact on treatment outcome and completion of parent training.

Administration

The scale is self-administered and takes approximately 10 minutes to complete. Individuals are required to tick the box that best describes their experience of each statement.

Scoring

The Likert scale represents a score for each item from 1 to 5 respectively, giving a minimum score of 14 and a maximum score of 70. All items are scored positively. The overall score for the WEMWBS is calculated by totalling the scores for each item, with equal weights.

Interpretation

A higher WEMWBS score therefore indicates a higher level of mental well-being.

Reliability and Validity

In a validation study (Tennant et al., 2007), WEMWBS demonstrated good content validity. A Cronbach's alpha score of 0.89 (student sample) and 0.91 (population sample) suggests some item redundancy in the scale. WEMWBS showed high

correlations with other mental health and well-being scales and lower correlations with scales measuring overall health. Its distribution was near normal and the scale did not show ceiling effects in a population sample. Test-retest reliability at one week was high (0.83). Social desirability bias was lower or similar to that of other comparable scales.

Home Environment

Infant and Toddler Home Observation for Measurement of the Environment

(Caldwell & Bradley, 2003)

This measure examines the child's behaviour and the interaction between the parent and child within the home environment (see Appendix J). The instrument comprises 45 items, divided into six subscales: Responsivity; Acceptance; Organisation; Learning Materials; Involvement; and Variety.

Administration

Items on the IT-HOME marked with an 'O' (observed) are marked with either a plus (+) or minus (-) depending on whether the behaviour was observed during the visit. Items marked with an 'I' (Interview), must be discussed with the parent (for example, "*child is taken to the grocery store at least once a week*"), and a plus or minus added to the items accordingly. Items marked with an 'E' (either interview or observation), are coded if the behaviour was observed. If the behaviour described on these items was not observed during the visit, then the parent is asked the question. The measure takes approximately 10 minutes to complete.

Scoring

The number of 'pluses' on each subscale are simply summed to give a total score for each domain. These scores are then entered on the front summary sheet.

Interpretation

The front summary sheet provides information as to the maximum possible score as well as the median score, obtained from normative studies.

Reliability and Validity

There are numerous studies attesting to the validity and reliability of this widely used, and researched, tool.

Parent-child Interaction

***Dyadic Parent-child Interaction Coding System- Revised* (DPICS – R; Robinson & Eyberg, 1981)**

This is an observational measure (see Appendix K). Thirty-seven parent and child behaviour categories are employed, summarised in terms of: parent behaviours, child deviance, child responses to commands, and parent and child affect. Coding is continuous and results in the total frequency of each behaviour per specified interval. Each behavioural category is clearly defined and accompanied by a series of examples, specific guidelines to aid discrimination between categories, and decision rules designed to aid decision making when there is uncertainty between categories. A modified version of the DPICS was used (Eyberg & Robinson, 1981; Webster-Stratton, 2000). The DPICS contains 45 categories. For the purpose of this evaluation three additional sub categories were included: Verbal Questions, Verbal Labeling and

Communication Coaching. Fifteen of these categories were combined to create four subscales of the DPICS (positive parenting, negative parenting, language promotion and child deviance). Sub-category selection was based on the work of Webster-Stratton (1998) and Hutchings et al. (2007).

Rationale for use

The DPICS represents an extensively researched observational measure of parent-child interaction that is well validated and incorporates measures of the behaviours that are targeted by the intervention such as praise, descriptive comments, questions, and limit setting strategies. The DPICS-R has been previously used in many IY studies (Hutchings et al., 2007; Jones et al., 2007; 2008).

Coding/Procedure

The DPICS can be applied in a variety of settings. The current evaluation includes summary variables reported in the Hutchings et al. (2007) study to facilitate comparison across studies and ages. The evaluation uses two parent summary variables: (1) positive parenting (sum of praise, both labelled and unlabelled, positive affect, physically positive behaviour and problem-solving): and (2) critical parenting (sum of negative commands and critical statements). The two child summary variables were: (1) child deviant behaviours (sum of physical negative behaviour, destructive behaviour, non-compliance, smart talk and cry/whine/yell); and (2) child positive behaviour (sum of positive affect: verbal and nonverbal, and physical warmth).

The parent (typically the mother) is observed interacting with their child at home for 30 minutes. The following conditions were required of family during the coding interval: television to be switched off, no telephone calls out, incoming calls answered briefly, unexpected visitors asked to call back later, both the parent and child to remain in the same room for the duration of the observation. There are no specific instructions as to what the parent and child should do during the observation, but typically, parents get out some of the child's toys and play for half an hour.

Scoring

The frequency of each behaviour is recorded. A total score for each summary variable is then calculated by summing the frequencies of the component variables. Reliability checks of observational assessment will be carried out at random by a second coder for 20% of all observations and must equal or exceed 70% agreement. Overall reliability for the three new sub categories are as follows: Verbal Questions 72%, Verbal Labeling 92% and Communication Coaching 73%.

Observers were blind to the participants' experimental condition at baseline and 6-month follow-up.

Reliability & Validity

The DPICS has shown good reliability as evidenced by a number of studies; for example Eyberg and Robinson (1981) demonstrated mean reliability between raters of .91 for parent behaviours and .92 for child behaviours.

The discriminant validity of the DPICS has been established through a number of studies. For example, Eyberg and Matarazzo (1980) found significant differences in

behaviour between pre and post-intervention observation of parents of speech and language disordered children. In addition, the DPICS differentiated a referred sample of parents with children with conduct problems from a matched comparison group of parents with developmentally normal children (Webster-Stratton & Lindsay, 1999).

Recruitment of services

The trial consisted of two recruitment phases, with the first being in North Wales in August 2008, and the second in South Wales in November and December 2008. All 22 Welsh authorities were invited to attend one of two recruitment meetings (see Appendix L). Local authorities wishing to participate were asked to sign service agreements confirming their interest (see Appendix M). The study aimed to recruit 6 service providers, but due to overwhelming interest, recruited 9.

Procedure

Initial contact with families was made through the staff who would be delivering the groups in the Flying Start area. Contact details of families interested in participating were then passed to the research team who then arranged a home visit to collect baseline data. Each data collection point involved two home visits. During this visit, the parenting programme and research aims and methodology was explained again and written consent obtained (see Appendices N & O). This was followed by the semi-structured interview using the PDHQ (Hutchings, 1996), administration of the parent report measures and developmental assessment of the child.

During the second visit, the observation of parent-child interaction took place and the IT-HOME was administered. The same format was used for the 6 and 12-month data collection points (see Appendix P for a full description).

Ethical Considerations

Ethical approval was granted by the North West Wales Research Ethics Committee in August 2008 (application number: 08/WNo01/43). At the recruitment phase, bilingual information sheets and consent forms were issued.

In order to ensure that all information remained confidential, participants were assigned an identification number to be used on all measures instead of names. The database that relates participants to their identification number is stored on protected computer files, encrypted with a password that is known only by the chief investigator (Nia Griffith) and supervisor (Professor Judy Hutchings). Note that the research team and the implementation team are entirely separate groups of individuals.

This chapter has summarised the main study aims and rationale, has outlined the IYTPP intervention, provided details of the assessment battery including administration, scoring and normative data and outlined study procedures. Further details can be found in Appendix A.

CHAPTER 4

Early childhood developmental assessment: Its history, some current tools, their usage and limitations.

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Paper in preparation

Introduction

This review was prompted by the need for suitable baseline and outcome measures for a Welsh Government funded randomised controlled trial (RCT) of an intervention for the parents of one- and two-year-old children living in socially disadvantaged "Flying Start" areas in Wales. Flying Start funding was provided across Wales to identified communities in recognition of the risk of poor outcomes for children living within those communities. The research funding allowed for a small RCT of the Incredible Years Toddler Parenting Programme (IYTPP). Tools for assessing risk in older children that identify problematic child behaviours, such as non-compliance and aggression, are not appropriate for this age group, however, in addition to parental and social factors associated with risk, there are developmental markers in the children themselves that also predicted poor long-term outcomes (Allen, 2011).

The history of developmental assessment is briefly introduced. Environmental factors that impact on children's development in the early years and put them at risk of long-term difficulties and the rationale for early intervention are described. Some early developmental screening tools and their suitability for identifying whom to target in early intervention and for assessing early intervention effectiveness are discussed.

Background

Like the study of adult intelligence the earliest work on children's development had a narrow view of intelligence as a unitary and largely inherited characteristic. This was strongly influenced by the 19th century views of Galton who,

in his book Hereditary Genius (Galton, 1869), argued for the inheritance of intelligence based on the observed frequency with which members of the same family demonstrated similar intellectual capacities. Intellectual development continues to be a topic of discussion but the concept of intelligence has been broadened to include the cognitive, linguistic, social and emotional skills that predict children's life chances (Allen & Duncan Smith, 2009; Goleman, 2006; Hart & Risley, 1995). There is also growing understanding of how environmental influences affect both children's intellectual development and their longer-term mental health and life chances (Allen 2011; Allen & Duncan Smith, 2009).

The history of child developmental assessment

Exploration of the development of children's intellectual skills and competencies began at the start of the 20th century, driven by the desire of psychologists to understand the way that children developed intellectually and to enable the identification of children who were not developing typically (Berk, 2000).

Some researchers used single case studies and collected a wealth of data on a small number of children, documenting changes over time and developing theories about the process of development, whereas others collected age related data on many hundreds of children (Berk, 2000; Papalia & Olds, 1975).

The work of Piaget in the 1930s was an example of the detailed case studies. He developed a theory of intellectual developmental stages from his observations of his own three children, recording detailed descriptions (Shaffer, 2002). While this was an excellent starting point it was time consuming, subject to bias, focused purely on

intellectual development and was not generalisable due to the small sample sizes (Berk, 2000). At the same time, between 1919 and 1948, Hall and Gesell observed large numbers of children of varying ages. From these observations, they calculated age related averages or "norms" that were used to develop the Gesell Developmental Schedules (Ball, 1977; Gesell, 1949). This approach is still used today and considered a gold standard for both full assessment and screening measures of child development (Bee, 1992).

The establishment of 'norms' meant that children could be compared with what would typically be expected at their age and this could be expressed as a developmental age or developmental quotient (DQ). This enabled the identification of children with significant developmental delay and who had special support needs (Bellman, Lingam & Aukett, 1996).

Early developmental assessment

Recognition that tools existed that could identify children with significant developmental delay and needing additional support led a number of researchers to focus on the first five years of life and there is now general agreement on the key stages or milestones during these early years (Zeanah, 2000). Early developmental milestones are categorised into sub-scales in which skills that are similar and tend to occur chronologically are clustered together. These generally correspond across the different measures, and broadly encompass physical, cognitive and social-emotional development. Mary Sheridan (1975) established a 'routine way of assessing competence' in children aged from birth to five years (Sheridan, 1975). She categorised aspects of child development into posture and large movements, vision

and fine movements, hearing and speech, social behaviour and play although many of these subscale skills are interdependent (Zeanah, 2000). The gold standard of tools for making full developmental assessments of child competence in the UK is the Griffiths Mental Development Scales, which currently exists in two parts, 0-2 years (Huntley, 1996) and 2-8 years (Luiz, et al., 2006) and can only be administered by paediatricians and psychologists following extensive training and certification. A US alternative to the Griffiths is the Bayley III (Bayley, 2005) and like the Griffiths, the Bayley III comes with a standardised assessment kit containing standardised test items that take between 30 and 90 minutes to administer. Scoring of the Griffiths and the Bayley III allows the test-administrator to generate a DQ for each subscale, which have clear cut-off scores indicating developmental delay.

The Sheridan, Bayley and Griffiths scales were developed to aid diagnosis of significant developmental difficulties in young children in order to provide additional support. Their use requires extensive training and is restricted to highly qualified professionals. They are still used extensively for diagnosis with the assessment process leading to intervention support for children. Alongside the work of developmental psychologists, learning theory research developed over the second half of the 20th Century establishing strategies to help children and adults, including those with significant learning difficulties, and effective interventions have been developed for children with severe learning difficulties, autistic spectrum disorders, ADHD and behavioural difficulties (Gardner, Lane, & Hutchings, 2004; Mallot & Trojan, 2008). The work of clinical psychologists in specialist children's services makes use of both of these fields of research and includes assessment and the development of

programmes of support for children with severe and significant developmental difficulties.

A more recent development in the UK has been the growing recognition of the extent of environmental influence on normal children's development. This has led to the provision of early preventive support for children living in communities that put them at risk of poor outcomes but who do not have severe or significant developmental handicaps. In particular the impact of the environment on lifelong outcomes for children born into different social circumstances has been recognised (Allen, 2011; Allen & Duncan Smith, 2009). For example deficits in linguistic skills have been shown to be particularly sensitive to environmental experience and are also key skills associated with academic success (Hart & Risley, 1995). As a result there have been social policy initiatives on both sides of the Atlantic to attempt to change these outcomes. In America the Head Start project is now over 45 years old (Zeigler & Valentine, 1979). More recently, in the UK, Sure Start (2001) and in Wales, Flying Start (2007) projects have been set up with the specific goal of reducing educational inequalities for children in socially disadvantaging circumstances. This has led to the need for reliable ways of identifying and assessing the important developmental skills that predict longer-term difficulties. So an additional purpose of early developmental assessment is to identify young children who, despite not having significant developmental problems, are at high risk for poor long-term academic, social and emotional outcomes and to assess the impact of intervention.

When environmental factors contribute to developmental delay the sooner it is identified, the more effectively it can be addressed, and the greater the likelihood of

successful outcomes (Allen, 2011; Squires et al., 2009). Some countries undertake universal developmental screening of young children and for some years this was done in the UK by health visitors (HVs). However as evidence emerged regarding the amount of time taken and the ineffectiveness of this universal procedure (Elliman et al., 2002) this was abandoned in favour of allowing HVs more time to work with high-risk children and their families and there is good evidence that they can accurately identify which children and families need additional support (Hutchings et al., 2007; Hutchings, Bywater, & Daley, 2007).

Social-Environmental factors impacting on the child

Much of the understanding of the environmental effects on child outcomes has come from longitudinal studies that have identified the long-term academic underachievement and lifelong mental and emotional problems. These include young and/or single parents, unemployment, housing difficulties, adult criminality or substance misuse and parental mental health difficulties (Ghate & Hazel, 2002; Kiernan & Mensah, 2009; Silva, 1990).

These factors tend to co-exist with poverty and one of the most robust findings is the detrimental effect of poverty on children's development (Brooks-Gunn & Duncan, 1997). Kiernan and Mensah (2009), using data from the Millennium Cohort Study, examined the relationship between poverty and children's cognitive development. They found that poverty, especially persistent poverty, was strongly related to children's cognitive delay. Gregg, Propper, & Washbrook (2008) examined the relationship between parental income and several child outcomes including cognitive ability and socio-emotional outcomes. They found that poor cognitive

stimulation provided in the homes of low-income families was a significant predictor of later cognitive and socio-emotional deficits. Using a decomposition analysis, they determined that the strongest predictor of later deficits was a lack of books and toys within the home, which is supported by other research findings (e.g. Guo & Harris, 2000; Yeung, Linver, & Brooks-Gunn, 2002). They also found that lower parental educational attainment among low-income parents was also associated with poorer cognitive and socio-emotional development (Gregg et al., 2008).

Another well evidenced finding is the effect of maternal depression on child development (Walker et al., 2007; Zeanah et al., 1997). To et al. (2004) examined potential risk factors for poor developmental attainment using data from a longitudinal study. They found that maternal depression was significantly associated with poor developmental attainment, especially in older children (four-seven years). They suggest that maternal depression may affect child developmental attainment by altering patterns of parent-child interaction and increasing marital discord. Work by Hutchings and colleagues links findings on maternal depression with problematic parenting behaviours and has shown a strong association between childhood conduct problems and maternal depression but also that parenting interventions to target conduct problems can improve maternal depression (Hutchings et al., submitted).

Parenting skill deficits

Patterson identified the key parenting skill deficits of inconsistency, harsh and critical parenting that are associated with poor long term outcomes (Patterson, 1982). Others have focused on the observational skill deficits of parents of high risk children (Gardner, 1992; Hutchings, Lane, & Kelly, 2004; Wahler & Dumas, 1989). Other

parenting factors that affect the child's development include problems arising from inadequate monitoring of the child resulting in increased risk of accidental injury, neglect due to failure to recognise the child's stimulation needs or physical and emotional abuse (Allen & Duncan Smith, 2009). Patterson and Forgatch (1995) have demonstrated the importance of focusing on specific parenting behaviours by demonstrating that the effects of poverty and other disadvantaging circumstances tend to be mediated through parents and the extent to which parenting behaviour is compromised.

Developmental assessment tools for young children

Early interventions with very young children, prior to their having developed obvious signs of problem behaviour, need tools that give information on the developmental status of the child both for initial identification of risk of potential long term poor outcomes and as a tool for evaluating intervention.

Most parents are aware of the major developmental milestones (Bellman et al., 1996; Sheridan, 1975). However in disadvantaged environments where the developmental norms will be lower and parenting skills may be less effective, many parents may not be aware of the most effective way to promote their child's optimal development, or the challenges facing their children. The need to support parents of these children has only recently been addressed in the UK with programmes like Sure Start. In these situations developmental screening tools are useful in identifying children who are developing in a way that predicts subsequent emotional and/or behavioural problems. A recent report by Allen (2011a; 2011b) makes a strong case for early intervention for both the children themselves and for society as a whole.

Screening tools for the Assessments of Early Childhood Development

The work of several pioneers of child development feature in many of the screening tools commonly used today, particularly the Sheridan (1975), Griffiths (1954; 1970) and Bayley (2005) scales.

Screening tests provide a snapshot of the child's development across domains. Information can be collected through observation of the child in free play, through the presentation of tasks, from parental report, or from a combination of these. One important role for screening tools is the identification of children with potentially significant developmental delay for further assessment. To do this a good screening test should have both specificity (i.e. it should spot all the children that are delayed on the particular measure) and sensitivity (i.e. it should not over-diagnose and identify too many children that will not have delay) of between 70-80% (American Academy of Paediatrics: Committee on Children with Disabilities, 2006).

A more recent use of developmental screening tools is by early years professionals to identify children whose development in a particular area, whilst not likely to be within a clinical range, would benefit from additional support. These assessments can identify young children that might not have the optimal environment for the development of good social and emotional skills and may be at risk of subsequent behavioural problems including conditions such as Oppositional Defiant Disorder, Conduct Disorder etc (Allen, 2011 Diagnostic Statistical Manual IV, 1994; National Institute for Health and Clinical Excellence, 2006).

A third use of developmental screening tools is to provide a measure of intervention effectiveness. This could be follow-up of an individual child or of a whole community that has been the recipient of a project that aims to enhance the life opportunities of children living within it (Belsky, 2006; Welsh Government, 2009) and where full developmental assessment of children would be uneconomic.

Four screening tests that are currently the most frequently used assessment tools in the UK were identified for review in relation to outcome assessment for the Flying Start RCT parenting project in Wales. Two are independently administered, the Denver II (Frankenburg, Dodds, Archer, Shapiro & Bresnick, 1992), and the Schedule of Growing Skills II (Bellman, Lingam, & Aukett, 2008), and two are parent report scales, the Ages and Stages Questionnaires (ASQ; Bricker & Squires, 1999), and the Parents' Evaluation of Developmental Status (PEDS; Glascoe, 1997).

Independently Administered Screening Tools

The Denver II

The Denver II (Frankenburg et al., 1992), a revision of the Denver Developmental Screening Test (Frankenburg & Dodds, 1967) has been widely used by professionals for over forty years. It was revised in 1992 to provide a more current set of norms and the inclusion of more language based items. It has 125 items that score onto five subscales (personal social, fine motor, adaptive, language and gross motor subscales; Frankenburg et al., 1992). It takes 10-20 minutes to administer, depending on the age of the child, and is suitable for use with children from two weeks to six years of age. The majority of the items are tested/observed directly by the test administrator, with a limited number of parent report items. The standardised

kit contains test items including a glass bottle, a rattle and a zipper bag. A child is classified as 'abnormal' in their development if they fail an item that 75% of the population can pass. The Denver II has been extensively used in Britain by professionals and para-professionals within the child care sector.

The normative sample data was established from 2036 children of varying ages from Colorado. Half were from urban areas, the other half from rural counties. Composite norms were created for the age at which 90% of children could pass each item. The Colorado census did not differ significantly from the US Census so the norms are considered generaliseable to the US as a whole.

Additional normative data are available for specific population subgroups including for gender, ethnicity, maternal education and locality, allowing the test administrator to select the most appropriate normative sample (www.denverii.com). One hundred and seven of the 125 test items have excellent inter-rater reliability. Sixty-three of the 125 items had excellent test/re-test reliability and a further 25 had fair to good test/ re-test reliability, with the remaining 37 having moderate to poor test/re-test reliability. However sensitivity levels range from 56 to 83% and specificity levels 43 to 80% (Glascoe, Byrne, Ashford, Johnston Chang & Strickland, 1992).

The Schedule of Growing Skills

The Schedule of Growing Skills II (Bellman, Lingam & Aukett, 2008) is based on items from the Stycar Sequences developed by Mary Sheridan (Sheridan,

1975). Although relatively new it was chosen by the Welsh Government for the evaluation of the effectiveness of the Flying Start programme across Wales where data have been collected on almost 17,000 children although these were not a representative sample so do not contribute to the norms. It was first published in 1987 by Bellman & Cash, and was developed as a brief, standardised screening tool for children from birth to five years of age. It contains 187 items, comprising ten subscales or skill areas (passive postural, active postural, locomotor, manipulative, visual, hearing and language, speech and language, interactive social, self-care social and cognitive skill areas; Bellman et al., 2008). As with the Denver scales, skills are assessed via a combination of direct assessment and parental report. Administration time is 20-30 minutes for a full assessment, less for specific domain assessments. Aside from its use in Wales where it is used by child practitioners, including Health Visitors and Flying Start Centre staff, the SGS II has relatively limited use to date, mostly in the UK.

Normative data were obtained following the assessment of 348 British children recruited from 'widely different geographical areas'. Male and female children were equally represented although children of ethnic minorities were over represented in the sample (Bellman et al., 1996). When items from the Griffiths scale (Griffiths, 1954; Huntley, 1996) were correlated with items from the SGS II, the agreements in overall age on all four main sub-categories were highly significant indicating almost perfect agreement (Bellman et al., 1996).

Test/re-test reliability is between 93 and 96% and inter-observer reliability between 0.47 and 0.97. Internal consistency ranged from 0.61 for the passive postural

area to 0.97 for the cognitive items with an average of 0.91. Both construct and concurrent validity were high. A recent study highlighted some limitations with the current scoring method of the SGS II, showing it to have low sensitivity in identifying children with significant delay when compared to results obtained from the Griffiths Scales (Williams, 2010). However an alternative scoring method devised to generate a DQ score was found to be a more sensitive indicator of developmental delay than the current scoring method (Williams et al., submitted).

Parent Report Scales

Ages and Stages Questionnaires: A Parent-Completed, Child Monitoring System.

The Ages and Stages Questionnaires III (ASQ; Squires, Twombly, Bricker & Potter, 2009) are a set of 19 parent completed questionnaires, developed to engage parents in the process of observing their child's development, to monitor the development of high-risk children and as an inexpensive tool by reducing the need for health practitioners to carry out lengthy assessments. Items were derived from research on developmental milestones and from the content of other developmental assessment tools including the Revised Gesell Developmental Examination (Knobloch, Stevens & Malone, 1980).

The ASQ III is used with children aged 4-60 months. Each questionnaire consists of five subscales; communication, gross-motor, fine-motor, problem solving and personal-social. Each sub-scale contains six developmental items, scored on a three-point scale. A trained professional scores the questionnaires. Children are referred for further assessment if they score two standard deviations below the mean

on any sub-scale. Administration takes 15 minutes and the questions are written at a language comprehensible at 6th grade level (usually 11-12 years of age).

Cut off scores for the revised ASQ III (Squires et al., 2009) were established from 18,000 questionnaires by parents, with an equal split of questionnaires being completed on paper or online. Families represented all 50 US states with data from parents of children with varying ethnicity, income levels and number of family risk-factors reported (including low maternal education, prematurity and living in severe poverty).

Psychometric properties of the ASQ III (Squires at al., 2009) appear very promising. The series has moderate to strong internal consistency, a test/re-test reliability level of 92% (based on data from 145 parents), and inter-observer reliability of 93% (based on n=107). Sensitivity levels range from 85-92% and specificity from 70-80% depending on which age questionnaire being used.

The ASQ III is relatively new and has therefore not been used in much research. However, the Ages and Stages Questionnaires (Second Edition) have been used extensively in the US in large community based projects such as Head Start, Early Head Start and Healthy Start (Squires et al., 2009). It has been used as a screening tool preceding a more in-depth developmental assessment with the Bayley in the Magpie Trial Follow-up study looking at the effects of Magnesium Sulphate for mothers with pre-eclampsia (Magpie Trial Follow-up Study Collaborative Group, 2004). It has also been validated against different tools (e.g. Gollenberg et al., 2010) and different populations (Dixon et al., 2009; Jee et al., 2010; Lindsay et al., 2008).

PEDS: Parents Evaluation of Developmental Status

The Parents Evaluation of Developmental Status was developed by Glascoe. (1997). PEDS asks parents about their concerns about their child's development, requiring them to answer ten carefully constructed questions targeting parental concerns, with additional space for any comments they may wish to make. Questions ask about concerns about things like speech production, language comprehension, motor skills, child behaviour and social skills, closely resembling domains of functioning that appear in standard assessments of child development (Bayley, 2005; Bellman et al., 2008; Huntley, 1996; Frankenburg et al., 1992).

The PEDS can be completed by parents of children from birth to 7 years 11 months of age. It is written in language comprehensible at 4th and 5th Grade, and takes 5-10 minutes to complete. Once parents have completed the response form, answers are transferred to a score form, where a colour coding system indicates whether a particular parent concern is a predictive concern i.e. that this concern is likely to be a valid concern that may predict or indicate future developmental delay, thus highlighting the need for a standardised assessment.

Standardisation was carried out using 2823 families from the USA. Reliability and validity data was gathered using the data of 771 children of varying socioeconomic status and ethnicity (Glascoe, 1999). Test/re-test reliability and inter-rater reliability was at 88%, sensitivity levels range from 74-79% and specificity levels from 70-80%.

Limitations of parent report scales

A potential limitation of both the ASQ and the PEDS is that although the results generally correlate with professional reports of child developmental levels it is likely that the parents of children most at risk would be the least accurate observers since the parents of these children are known to have observational skill and monitoring deficits (Wahler & Dumas, 1984; 1989). Furthermore parents of children with behavioural difficulties have high rates of depression also associated with global and inaccurate observation skills. Consequently, without specific data demonstrating their accuracy with this population, the use of parent reporting as a screening tool needs to be considered with caution.

Conclusions

Developmental assessment has a long history from classification to explanation of developmental processes to screening and assessing of problems for treatment and outcome assessment. Its potential uses have changed over time but now include the identification of high-risk children in need of further assessment, intervention and for the purpose of evaluating progress of intervention.

The recognition that there are multiple risk-factors associated with non-optimal child development, particularly in areas with high levels of socio-economic disadvantage, coupled with a commitment to invest in children's services by government, means there is a clear need for reliable screening tools for use within community settings. Conducting full assessments of child development within these types of settings is often not feasible, and the availability of alternative methods of assessing children's needs and progress is essential. Although screening tools have some limitations their advantages are that they are brief, can be used by a variety of

individuals including parents, and can provide a snapshot of communities and groups of service users with subsequent opportunities to evaluate the outcome of community wide preventative initiatives, as with the use of the SGS II within the Flying Start setting.

While the use of standardised screening tools is highly recommended, literature outlining discrepancies between direct assessment and parental report should be considered carefully when selecting measures of child capabilities, particularly for use with vulnerable populations. Future research in this area should explore further any disparities between direct assessment and parent report screening tools, particularly with families in deprived communities where the accurate utilisation of screening measures are central to the effective detection of deficiencies and allocation of resources.

CHAPTER 5

STUDY 1

Targeting communities to tackle the negative impacts of child poverty: What have we learned?[1]

[1] This study formed the basis of a paper submitted for publication in Journal of Children's Services: Griffith, N., Hutchings, J., Bywater, T. & Daley, D. *Targeting communities to tackle the negative impacts of child poverty: What have we learned?* Manuscript submitted for publication

Abstract

Purpose: To explore the baseline characteristics of parents and children recruited from Flying Start areas in Wales to participate in an RCT of a parenting intervention. Flying Start areas are targeted geographically to receive additional funding for 0-3 year old children at risk of poor outcomes in later life.

Method: A battery of measures was administered to parents and children that included information on demographic characteristics and parental mental health, competence and stress. Researchers measured child development and quality of the home environment and undertook observations of parent-child interactions. These data are explored and contrasted with the baseline characteristics of parents and children recruited from Sure Start areas in Wales for a similar RCT of a parenting intervention. The Sure Start study screened for inclusion using a measure of child conduct problems.

Findings: Flying Start families were experiencing higher levels of socio-economic deprivation, mental health problems and parenting stress as well as other known risks to child outcomes than the general population. However, when compared with the targeted population recruited for the Sure Start study, they were shown to be experiencing significantly lower levels of deprivation, parental mental health problems, stress and other risks for poor child outcomes. The paper explores the implications of these findings in terms of the results of targeting via geographical area alone and suggests potential screening measures that would identify children who are at greatest risk of poor outcomes.

Originality/Value: This paper contributes to the discussion about effective ways of allocating resources in an age of austerity.

Keywords: Sure Start; Flying Start; deprivation; risk-factors; child-outcomes.

Introduction

One in five children in the UK are at risk of poverty (Eurochild, 2010). with the UK ranking lowest in Europe for child well-being, despite being one of the wealthiest European countries (UNICEF, 2007). While the gap is narrowing between areas of the UK, poverty rates in Wales are above the UK average. In 2010 an estimated 200,000 children (32%) in Wales lived in poverty (Welsh Government, 2010: Winckler, 2009), with this increasing to 33% in 2011 (Welsh Government, 2011). Living in poverty is defined by the Welsh Government (WG) as an income after housing costs that is 'below 60% of the median income' for families. This equates to £78 per child and £86 per adult per week (Welsh Government, 2011). Developing strategies to reduce both poverty and its effects has become a top priority for the Welsh Government, and is a key feature of many policy initiatives (Welsh Government, 2010).

Negative outcomes associated with poverty

Living in poverty is associated with many negative outcomes for children, most notably poor physical health (Everson, Maty, Lynch & Kaplan, 2002; Hertzman & Weins, 1996; Larson, Russ, Crall & Halfon 2008) poor mental health (Black, Morris, Smith & Townsend, 1982; Bruce, Takeuchi & Leaf, 1991; Caspi, Taylor, Moffit & Plomin, 2000), delayed development (Duncan, Brooks-Gun & Klebanov, 1994; Emerson & Einfeld, 2010; Keirnan & Mansah, 2009) including language delay (Hart & Risley, 1992) and poor academic achievement (EYSTN, 2010; Feinstein, Duckworth & Sebates, 2004; Welsh Government, 2011). There is an increased risk of behavioural and emotional difficulties including conduct problems, (Caspi, Tylor, Moffitt & Plomin, 2000; Colman et al. 2009; Keirnan & Mansah, 2009; Webster-

Stratton, 1998), Attention-Deficit Hyperactivity Disorder and cases of child physical abuse (Belsky, Barnes & Melhuish, 2007; Whipple & Webster-Stratton, 1990).

Problems in early childhood are associated with adolescent delinquency (Farrington, 1995; Patterson, Debaryshe & Ramsey, 1989) and subsequent adult criminality, high levels of unemployment and or transient, poorly paid employment (Duncan, Ziol-Guest & Kalil, 2010). Much of the evidence for the longer-term effects come from longitudinal research such as the Dunedin longitudinal study (Poulton et al., 2002), the Cambridge study in delinquent development (Farrington, 1995) and the work of Patterson and colleagues from the Oregon Social Learning Centre, (Loeber & Dishion, 1983; Patterson, DeBrayshe & Ramsey, 1989; Patterson & Stouthamer-Loeber, 1984).

Factors associated with an increased likelihood of a child living in poverty include parental unemployment, large family size, lone parenthood and an ethnic minority background, (Eurochild, 2010; Office of National Statistic, 2007). But these risk factors also act independently and can magnify the negative consequences of growing up in poverty (Larson, Russ, Crall & Halfon, 2008). There are well-documented intergenerational effects with negative child-outcomes in one generation becoming a risk factor for the next generation of that family (Barrientos & DeJong, 2006; Farrington, 2000). The causal mechanisms are, however, unclear and the effect of poverty on child outcomes may be mediated by the extent to which it impacts on parenting practices (Patterson & Forgatch, 1995; Patterson, Forgatch, Yoerger & Stoolmiller, 1998). Stress and maternal depression are more prevalent in low SES areas, and both stress and depression are strongly associated with both perceived and actual levels of child behaviour problems (Hay, Pawlby, Waters, Perra & Sharp, 2010; Hutchings et al. 2007; Webster-Stratton & Hammond, 1988).

Increased life stress, as a result of living with economic disadvantage has been shown to affect parenting practices, in turn increasing levels of conduct problem behaviour among children (Mensah & Keirnan, 2009; Patterson et al. 1989; Webster-Stratton, 1998; Webster-Stratton, 1990), with evidence suggesting that the maintenance of positive parenting despite the stress of economic disadvantage acts as a protective factor in relation to the development of child conduct problems (Patterson & Forgacht, 1995). In addition, there is a growing body of research documenting the effects of stress and life adversity on the biological make-up of children's brains. (Cicchetti, Rogosch, Gunnar and Toth, 2010; Glaser, 2003; Lai & Huang, 2011; McEwen, 2007). Children who have experienced poor stimulation, negative interactions and elevated levels of stress early on are at greater risk of having poorly developed neural pathways for emotional, cognitive, behavioural and language systems early on in life, leaving them under resourced in later life to build upon these networks to achieve their optimum learning and health capacity (Shonkoff & Phillips, 2000; Shonkoff, 2011).

Evidence from strategies intended to reduce the negative effects of poverty

Differing approaches to alleviate, or promote resilience to, the effects of growing up in poverty have been explored. The USA has more extensive funding for research (Aos, 2010), and consequently, the UK has taken much of its lead from this work (Welshman, 2010).

Research strategies fall broadly into two categories depending on the model of explanation used. The idea that poverty directly affects children's life chances has resulted in strategies that target circumstances around the child, for example by increasing income and employment opportunities whereas those that see the problem as being the impact of poverty on parenting, target parents and children directly.

These latter strategies include early enrichment programmes for children and/or parenting programmes.

Evidence from the USA.

1. Family circumstance interventions

Interventions and policies intended to alter family circumstances have had relatively limited success. Attempts to encourage mothers back to work through Welfare Reform yielded successful results in terms of employment status and poverty levels (Lee, 2009; Moffit & Winder, 2003), but predicted improvements in child outcomes were not realised, with research suggesting a negative impact on children living with multiple risk factors (Lee, 2009).

Moving to Opportunities (MTO), a project that moved families from deprived neighbourhoods to more affluent areas was also unsuccessful in changing child outcomes despite early indications of positive effects on child academic achievement (Laventhal & Brooks-Gunn, 2004; Ludwig, Ladd & Duncan, 2001) and reduced exposure to violent crimes and drugs (Kling, Leibman & Katz, 2005). Gains in academic achievement of males were not maintained and, long-term, MTO children had worse academic achievement than their peers that had not been moved (Kling, Duncan & Brooks-Gunn, 2006; Laventhal & Brooks-Gunn, 2005; Sanbonmatsu). Furthermore there were no improvements in parental employment or earnings (Turney, Clampet-Lundquist, Edin, Kling & Duncan, 2006). These studies suggest that changing family circumstance alone may not be an effective way to alleviate the effects of poverty on children.

2. Early enrichment & parenting

Support for pre-school children living in poverty is a core component of many government initiatives on both sides of the Atlantic. Interventions have varied in their

delivery, with some focussing on the child, some on the parents, and others on both parent and child, with growing evidence of the effectiveness of parenting support (Barlow, Smailagic, Ferriter, Bennett & Jones, 2010; Barrett, 2010). Intensive investment in enrichment and parenting support programmes have been shown to have a significant positive effect on the family circumstances and to produce long lasting improvements in outcomes for children living in poverty, most notably demonstrated in the work of the Nurse Family Partnership intensive parent support programme for young, vulnerable parents (Olds et al. 1997;Olds et al. 1998; Olds, Henderson & Kitzman, 1994).

Several parenting programmes have been developed and are operational in the US, with only 11 reaching Blueprint for Violence Prevention status (Webster-Stratton, Mihalic, Fagan, Arnold, Taylor & Tingley, 2001). The promotion of positive parenting among low-income families can assist family resiliency to the risks associated with poverty where it is not possible to change other factors (Webster-Stratton & Hammond, 1998). The use of parenting interventions such as the Incredible Years series with disadvantaged families have reduced negative parenting and child conduct problems (Webster-Stratton, 1998), been effective with diverse communities (Reid, Webster-Stratton & Beauchaine, 2001) and positive outcomes have been maintained in the long-term (Webster-Stratton, Rinaldi & Reid, 2011).

Evidence from the UK.

1. Family circumstance interventions

Since 1997 the Labour government introduced a number of initiatives to improve child outcomes, including the Welfare Reform Act 2009. One requirement of the act was that parents of children aged seven and above had to claim job seekers allowance rather than income support in a bid to get more parents working (Haux,

2010). As in the US, welfare reform in the UK had mixed results. Programmes such as Working Families Tax Credit and New Deal have ensured more families, particularly lone parents, are back in the workforce, however research on the effects on child outcomes of such measures is limited. The UK continues to work towards targets to reduce child poverty and further changes to the UK benefit systems will be introduced under the coalition government Welfare Reform Bill (Department for Work and Pensions, 2010) where benefits will be streamlined in an attempt to remove more barriers to returning to work as the UK continues to work towards targets for child poverty.

2. Early Enrichment & Parenting UK

The UK government has had a number of targeted initiatives for parents and children including preschool provision, increased health visiting and investment in parenting with the aim of reducing direct risks of poor child outcomes. Early intervention to improve parenting practices would appear to be a more cost effective way of dealing with later problems such as behavioural difficulties and anti-social behaviour than through subsequent crisis remedies (Charles, Bywater & Edwards, 2011; Department for Children Schools and Families, 2007; Edwards, Ceilleachair, Bywater, Hughes & Hutchings, 2007; Gardner, Lane and Hutchings, 2004; Scott, Knapp, Henderson & Maughan, 2001). Consequently, the provision of parenting classes has been a core component of many government strategies (Scott, O'Connor & Futh, 2006).

Sure Start (SS)

Unlike interventions such as Head Start and Early Head Start in the USA that targeted **high-risk** families living within disadvantaged communities, Sure Start (SS)

funding in the UK provided universal access services for under fives within high-risk communities. The Sure Start initiative was area-based and targeted areas/communities with low incomes. The initial investment in England of £450 million was to provide pre-school education, parental support, and increased access to a range of services for parents and children (Belsky, Barnes & Melhuish, 2007; Welshman, 2010).

Identification of Sure Start Local Partnerships (SSLP) areas was done locally. Areas were intended to have high levels of deprivation, a high concentration of pre-school children and be geographically quite small, so that resources could be concentrated and accessible (Barnes, 2007; Glass, 1999). Little guidance was provided on how the funds should be spent (around £1250 per child per annum), only that it should be spent on the 20% most deprived communities (Belsky et al. 2007).

Limited improvements were seen in child outcomes; marginally less chaotic homes and mothers being more accepting of toddlers' behaviour. Certain sub-samples of mothers exhibited less negative parenting practices, however, the children of high risk parents, including teen mothers, workless households and lone parents, had lower verbal ability, lower social-competence and greater levels of behaviour problems than their counterparts in non-SSLP's. The results suggested a negative impact on higher-risk families (Belsky et al. 2007), while 'less disadvantaged' families who had 'more personal, social and economic resources available to them', were the ones who benefitted, albeit only marginally (Belsky & Melhuish, 2007). So an intervention, targeted only by geographical area, achieved modest improvements for children of lower-risk parents and apparently had an adverse effect on the children most in need of support. Early SS funded projects had two problems; the first was that take-up tended to favour provision of services to the more advantaged, easier to engage, members of the communities and the second was that a lack of guidance about use of

evidence based programmes resulted in the introduction of a plethora of interventions of varying quality. This has to some extent been remedied and the Westminster and Welsh Governments have since given guidance on, and funded training in, evidence-based programmes (Children's Workforce Development Council, 2010; Welsh Government, 2005; Welsh Government, 2009)

The Family Nurse Partnership is a targeted intervention now being delivered to identified high-risk, first time mothers in the UK during pregnancy and the first two years of the child's life. This is a UK trial of the Nurse Family Partnership (Olds, 2006) that has over 30 years of follow-up in the US. The UK government initially launched a pilot study in 10 centres with early results suggesting reductions in smoking and alcohol consumption in pregnant women, increased parental competence in both mothers and fathers and increased incidence, and prolonged use, of breastfeeding (Barnes, Ball, Meadows, McLeish, Belsky and the Family Nurse Partnership Implementation Research Team, 2008). Data are available on child outcomes up to age 24 months and findings indicate that the number of consecutive pregnancies was reduced, positive parenting practices were evident and parenting competencies had improved (Barnes et al., 2011). This programme has now been rolled out to a further 40 areas and is the subject of a rigorous RCT.

In Wales a targeted evidence-based parenting programme, the Incredible Years (IY) parent programme (Webster-Stratton, 1998), delivered in Sure Start (SS) areas was effective in reducing child conduct problems. The programme was delivered by local Sure Start staff. However, instead of offering the programme to all parents in the Sure Start areas, families were targeted by local health visitors using a measure of child conduct problems as a screener and 74% of the 221 families initially contacted by the research team met inclusion criteria on the measure of child conduct

problems and signed up for the study (Hutchings et al., 2007). Although only screened for levels of child behaviour problems these families also had high levels of other disadvantaging circumstances. This illustrated the effectiveness of using trained health professionals to identify high-risk families. The trial demonstrated significant reductions in child problem behaviour, parental depression and stress and significant increases in positive parenting practices at 6-month follow-up (Hutchings et al. 2007). Benefits were maintained at 18-months (Bywater et al., 2009), and at four year follow-up (Bywater, Hutchings & Whitaker, in preparation). Moreover, the intervention was equally effective for children from low-income families and with depressed, young and/or single parents (Gardner, Hutchings, Bywater & Whitaker, 2010), and for children with risk-factors for ADHD (Jones, Daley, Hutchings, Bywater & Eames, 2007), all factors known to increase risk for poor child outcomes.

Flying Start (FS)

Following the SS initiative in Wales, the Welsh Government implemented the Flying Start (FS) initiative in 2007 as part of their seven core objectives for children and young people in Wales (Welsh Government, 2010; Welsh Government, 2011) and funding has recently been extended to 2014. To enable effective allocation of scarce resources, Flying Start was introduced across Wales into what were identified as the most deprived communities, encompassing approximately 25,000 0-3 year olds, (Prabhakar, Thompson & McCrindle, 2008). Unlike Sure Start areas that were identified by local councils, Flying Start areas were identified by the Welsh Government using strict criteria to ensure consistency. They were based on primary school catchment areas and selected by a combination of levels of deprivation from the Welsh Index of Multiple Deprivation, (Welsh Government, 2005) and Free School

Meal entitlement (FSM). The Welsh Index of Multiple Deprivation combines eight indices of deprivation, income, employment, housing, access to services, education, health, community safety and physical environment (Welsh Government, 2008) with indices of employment status and income carrying greater weight as they were considered to be the most indicative of deprivation (Welsh Government, 2008).

As with Sure Start, Flying Start services are available to, and funded for, all parents of children between the ages of 0-3 living within the designated area. This decision was taken despite evidence that targeting geographically only reaches around 50% of the most deprived children and does not necessarily result in take up by the highest risk families (Melhuish & Hall, 2007), and despite recognition that it is income and parenting rather than locality have the greatest influence on outcome (Welsh Government, 2011).

Flying Start services are required to deliver four components: free high quality childcare for all two year olds, increased Health Visitor (HV) support from a dedicated Flying Start Health Visitor with a reduced caseload, parenting programmes and parent and child language and play sessions. Flying Start was expected to yield short-term benefits including early identification of family needs and reductions in child protection referrals, with longer term goals including a reduction of Flying Start families with poor basic skills, higher levels of child academic achievement, improved levels of employment and increased incomes for parents (Welsh Government, 2009).

Independent Evaluation of the IY Toddler Parenting Programme

In 2007 the Welsh Government funded a small-scale independent evaluation of the IY Toddler parenting programme (Webster-Stratton, 2008), targeting parents of

one and two year old children living in Flying Start areas. The IY programme was one of the parenting programmes recommended by Welsh Government for delivery as part of the Flying Start initiative (Welsh Government, 2010). The study aimed to evaluate the effectiveness of the programme in sites across North, Mid and South Wales. Local Flying Start parent support staff recruited eighty-nine families.

The following section describes the demographic characteristics of this small sample and considers whether they represent those most at risk of poor outcomes.

Measures

Baseline characteristics were collected via a battery of standardised and validated measures, described in detail in Chapter 3. This included demographic information (Hutchings, 1996), measures of parental well-being (Beck, Ward, Steer & Brown, 1996; Tennant et al. 2007), stress (Abidin, 1990) and competence (Johnston and Mash, 1989), a measure of child development (Bellman, Lingham & Aukett, 1996), the level of enrichment of the home environment (Caldwell & Brady, 2003), and an observational measure of parent-child interaction (Eyberg and Robinson, 1981; Webster-Stratton, 2000). The measures were selected for the evaluation of a RCT (Chapter 6) to include the main factors known to increase the risk of poor child outcomes and/or those known from previous literature to improve as a result of attending a parenting course.

Participants

Primary carer parents of 89 children were recruited from eight Flying Start areas across North, Mid and South Wales. The children had a mean age of 21.19 months (SD 6.29) at baseline and included 52 (58.5%) male and 37 (41.5%) female

children. The 89 primary caregivers had a mean age of 28.97 (SD 6.72) years and two were male.

Income and source

Families are defined as having below average income if their total weekly income after housing costs falls below 60% of the median income "for families of that type" (Welsh Government, 2010). This equates to £322 for a family of two adults and two children, and £239 for a one parent and two children family (equivalent to £83 per adult and £78 per child). Sixty-one percent of families within our sample were living below the recognised poverty index.

Fifty-two percent of families were in some form of employment, while the remaining 48% were wholly state benefit dependent. Of those families in employment 24% qualified for added state benefit to top-up their income. Benefit dependent families were over three times more likely to be living below the recognized poverty level and 40% of working families where wages were the main source of income were living below the recognised poverty indicator, highlighting the high-level of in-work poverty in Wales (see Table 5.1).

Parental Education

Thirty-six percent of primary caregivers left school without any qualifications. However 52% achieved GCSE/COE qualifications, including 12% who achieved A-level or equivalent qualifications. Of the 36% who left school without any qualifications, 63% remained unqualified at the point of baseline interview.

Table 5.1

Percentages of families living above and below the recognized poverty line by income and housing source.

Income Source	Above Poverty line	Below Poverty line	TOTAL
State benefits	23%	77%	100%
Part Employed + added state benefit	36%	63%	100%
Employed	60%	40%	100%
House owned	64%	36%	100%
Council/housing association house	28%	72%	100%
Privately rented accommodation	37.5%	62.5%	100%

Multiple risk factors, assessed using SED6

A risk score was calculated for each family from the Personal Data and Health Questionnaire (Hutchings, 1996). A one-point score is given for the presence of each of the following risk factors; living in a workless household, lone parent household, a large family (3 or more children), parent with no educational qualifications, housing that is of poor quality/overcrowded and living in an area of high crime (area crime status established via www.police.co.uk), (see Table 5.2). Fifty-five per cent of families were classed as high risk, that is they had two or more risk factors present.

Parental Depression

As the incidence of mental health problems is higher in individuals living in deprived areas, as well as in parents of children who exhibit behavioural difficulties and/or developmental delay, levels of depression were assessed using the Beck Depression Inventory (BDI II; Beck, Ward, Steer & Brown, 1996) and are reported in Table 5.3. The sample had a mean depression score of 10.82 (SD 9.44), which is defined as minimal depression (<13). Seventy one percent of the sample scored below the cut-off for mild depression and 16% of the sample reported clinically significant levels of depression (>29).

Table 5.2

Cumulative Risk Factors Experienced by Families

Number of identified Risk Factors	n	%
0	20	22.5
1	20	22.5
2	14	16
3	18	20
4	12	14
5	3	3
6	2	2
Total	89	100

Table 5. 3

Levels of Parent Reported Depression using BDI II

Level of Depression	n	%
Minimal (0-13)	63	71
Mild (14-19)	12	13
Moderate (20-28)	10	11
Severe (29-63)	4	5
Total	89	100

Parenting stress

The mean total score for parenting stress obtained from the Parenting Stress Inventory-SF (Abidin, 1990) was 76.01 (SD 20.54), which is below the cut-off for clinically significant levels of stress of 90. Twenty-one percent of parents reported clinically significant levels of stress (>90).

Child Development

The Schedule of Growing Skills (SGS II; Bellman, Lingham & Aukett, 1996) was used to assess the 89 children for developmental delay. Results from the SGS assessments were converted into developmental quotient (DQ) scores using a formula developed by Hutchings et al (Unpublished) and validated by Williams (2010). Under the new scoring method a child is awarded a score for every item they successfully

pass, rather than taking the final score from the final item the child successfully completed, ensuring that a child's capabilities are not overestimated. A Developmental quotient is then calculated for each child by dividing the child's developmental age with their chronological age, and then multiplies by one hundred. A child is considered to have delayed development if they score below a DQ of 85 on two or more of the subscales of the measure. The proportion of children who were functioning within, above and below normal limits on each subscale is illustrated in Figure 5.1.

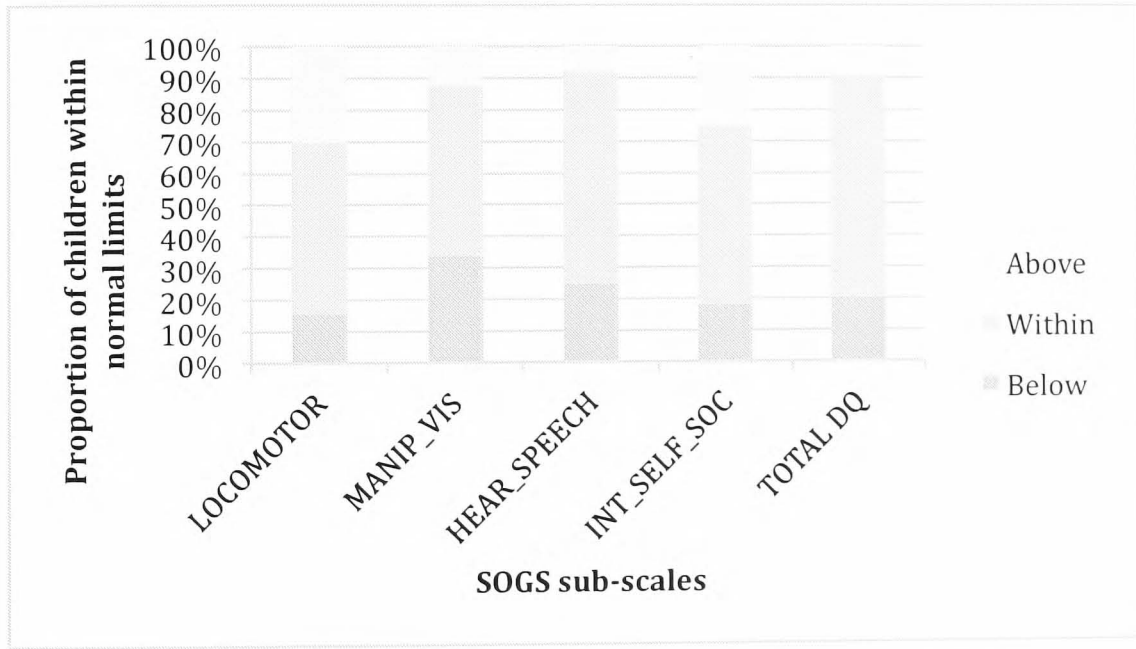

Figure 5.1. Proportion of children above, below and within the normal range of functioning across subscales measured using the SGS.

Taking the total DQ score, 20% of children are functioning below the DQ 85 cut-off. However if developmental delay is defined as having a DQ <85 in two or more sub-scales, 25% of the children can be categorised as having significant developmental delay. This is higher than the 5-10% prevalence in the general population, yet not as high as the predicted four-fold increase in deprived communities (Keirnan & Mensah, 2009). Further analysis comparing the sample on

key measures of risk indicates that there are some differences between families of children who are developmentally delayed at baseline and those who are not (see Table 5.4).

Table 5.4

Comparison of Risk Categories for Families of Delayed Versus Non-Delayed Children at Baseline.

Measure	Devel. delay sub-sample Mean (SD)	No-devel. Delay sub-sample Mean (SD)	P value	Effect Size *r*	95% CI
BDI II	12.70 (10.64)	10.28 (9.07)	.314	0.12	(-7.19 to 2.34)
SED6	2.40 (1.67)	1.87 (1.56)	.193	0.14	(-1.33 to 0.27)
PSI-SF	83.90 (25.04)	73.48 (18.41)	.04*	0.21	(-20.54 to 0.30)
Positive Parenting (DPICS)	80.40(48.70)	83.09 (29.61)	.791	0.03	(-17.48 to 22.87)
Negative Parenting (DPICS)	27.40 (26.30)	18.81 (15.27)	.244	.28	(-23.61-6.42 to 1.48)

Note: Using *r* as effect size, where 0.3 is cut off for medium effect.

Families of children experiencing delay reported higher levels of depression and stress, increased numbers of risk-factors, increased levels of observed negative parenting and lower levels of positive parenting when compared with their peers who were not identified as having developmental delay. However, independent t-tests revealed that only parent reported stress was at a significantly higher level for parents of children who were delayed.

Further exploration revealed some significant associations between measures of parent stress, mental health and risk, as illustrated in Table 5.5.

As expected, there are strong associations between measures of parental mental health and parenting stress. In addition both parental stress and poverty status are the factors that are most strongly associated with poor child developmental status.

Table 5.5

Correlation of Main Factors of stress, depression and multiple risk at baseline

	PSI-SF	BDI II	SGS II	WEMWBS	Below Poverty index
PSI-SF	.	.474**	-.257*	-.573**	.181
BDI II		.	-.018	-.679**	.171
SGS II			.	.099	-.252*
WEMWBS				.	-.086

* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)

Comparison of the Flying Start sample characteristics with the North Wales Sure Start study

Given the more stringent selection criteria used by the Welsh Government to define Flying Start areas, Flying Start populations would be expected to have higher levels of disadvantage relative to Sure S populations, which targeted a greater number of larger sites across Wales. Whilst the sample recruited for the Flying Start study had above population mean levels of disadvantaging circumstances, many of the study participants were not those whose children were most at-risk of poor outcomes. When baseline data from the Flying Start sample was compared with that of the North Wales SS study where the Eyberg Child Behaviour Inventory, a measure a child behavioural difficulty (ECBI, Eyberg & Ross, 1978), was used to identify children clear differences emerge. See Hutchings et al. (2007) for further details of the North Wales Sure Start study.

Households below average income

The proportion of families living below the recognized poverty indicator in the Flying Start sample was 61%. While this is considerably higher than the national average (35%), it is lower than in the targeted high-risk sample recruited in the Sure Start study (89%; see Figure 5.2).

Parental mental health, stress and risk

When comparing the depression scores of the Flying Start sample with the targeted Sure Start sample, the mean total scores obtained from the Beck Depression Inventory (Beck, Ward, Mendelson, Mock & Erbaugh, 1961; Beck, Ward, Steer & Brown, 1996) at baseline were markedly different (see Table 6). Sure Start families had a significantly higher mean score than Flying Start families, with many more reporting clinically significant levels of depression.

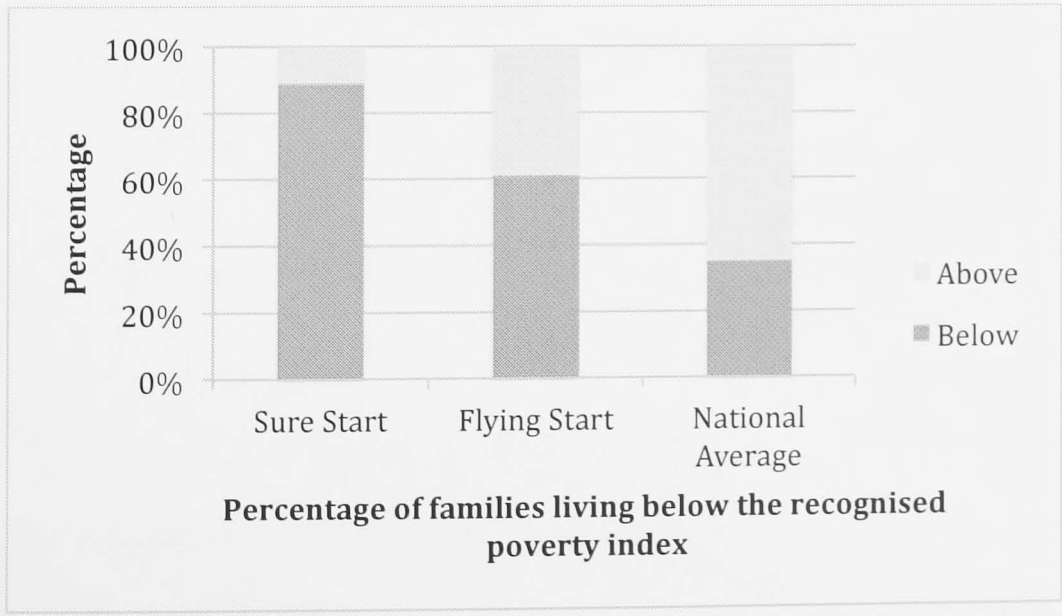

Figure 5.2: Number of families living below the nationally recognised poverty line.

The same was true for the PSI-SF scores (Abidin, 1990), where similarly the mean total stress score for the Sure Start sample was significantly higher than the Flying Start sample, and when using a clinical cut off of 90, a much higher proportion

of the Sure Start sample were reporting scores in the clinically significant range than the Flying Start families.

When comparing the number of risk factors, as reported by the SED6 (socio-economic disadvantage indicator), again the Sure Start sample had a higher mean score and a higher proportion of families experiencing two or more risk factors (see Table 5.6).

Table 5.6

Comparison of SED status, baseline depression, stress and observed negative parenting scores for SS and FS parents.

Measure	FS M (SD)	SS M (SD)	P value	FS Clinical Significant*	SS Clinical Significant
BDI II	10.82 (9.44)	16.48 (10.39)	<.001	16%	37%
PSI-SF	76.01 (20.54)	100.36 (23.47)	<.001	21%	67%
SED 6	1.99 (1.60)	2.88 (1.48)	<.001	55%*	80%*
Negative Parenting at BL (DPICS)	20.71 (18.40)	21.37 (16.52)	.79	NA	NA

*Percentage with 2 or more risk factors

Discussion

The recruitment of families living in designated Flying Start areas with children aged 12-36 months for participation in an RCT of an early parenting programme was successful. All families resided in Flying Start areas and, as a result it was anticipated that these families would be experiencing high levels of deprivation. This was the case for many of the sample. Recruited Flying Start families were experiencing higher levels of poverty, were younger parents, were more reliant on benefits and social housing, and had fewer qualifications than the national

averages for families. In addition, some parents were experiencing clinically significant levels of stress and depression and 25% of children showed evidence of significant developmental delay in two or more areas of functioning using a simple screening tool. The Flying Start method of geographical targeting recruited families who were reporting several of the risk-factors associated with living in deprived areas, indicating that targeting by locality is a effective way of reaching *some* high-risk families. However, when the Flying Start sample was compared with the targeted Sure Start sample (Hutchings et al, 2007), who were identified by HV's as having a known risk factor, in this case challenging child behaviour, a sample that had significantly higher levels of many other risk factors was recruited. This demonstrates that targeting by locality alone resulted in the recruitment of a lower risk sample in terms of perceived risk to negative outcomes. Consequently, despite the Flying Start intention of overcoming problems of targeting by locality, like the English Sure Start project, the problem of take-up of services like parenting interventions by those most in-need was not addressed. The comparison of data from the two samples demonstrates the benefits of using an additional targeting measure in addition to geographical targeting.

The provision of additional resources to identified geographical areas provides healthcare professionals with the opportunity to administer more specific targeted interventions. However, different targeting measures will be needed depending on the age of the children. Children in the Flying Start sample were younger than those in the Sure Start sample, and a measure of child conduct (e.g. Eyberg & Ross, 1978 as was used in the SS study) would not have been suitable for identifying families within the Flying Start catchment areas. There are several other potentially suitable tools for the identification of children whose families are in need of additional services.

including income levels, parental stress and depression and child developmental status all of which are associated with increased risk. Flying Start HVs already use the SGS developmental measure with children on their 2nd and 3rd birthday and data collected for this study indicates that the SGS could help to identify children at greatest risk for poor outcomes both in terms of the child's developmental needs and because, as this and other studies demonstrate, this also identifies those families experiencing most stress, depression and poverty (Emerson & Einfeld, 2010). The Sure Start study found that child behaviour problems were highly correlated with parent stress and depression. The current study suggests that measures of parental depression and stress are also associated with a measure of developmental delay.

An additional problem that is not addressed by either of these studies is that only half of children living in poverty in Wales live in the most deprived communities (Melhuish & Hall, 2007). Therefore, even successful targeting within Flying Start or Sure Start areas excludes more than half of the high-risk children who could potentially benefit from intervention, and a strategy is needed to ensure delivery of services to high-risk families living outside of high-risk postcodes.

At the present time, when the UK government is making considerable cuts in public funding and alterations to the UK benefit system, it is important that resources are targeted on those most in need to ensure that services are both effective and cost effective.

Key Messages:

- Geographical targeting effectively reaches some families in need of services

- Additional targeting within geographical areas using simple screens for risk factors can result in the identification of families with a greater need for intervention
- Simple screening for factors associated with poor child outcomes such as poverty, parental stress, poor parental mental health and delayed child development should be utilised to allocate services and resources more effectively.

CHAPTER 6

STUDY 2

Evaluating the Incredible Years Toddler Parenting Programme with parents of toddlers in disadvantaged (Flying Start) areas of Wales.

[2] This study formed the basis of a paper under preparation: Hutchings, J., Griffith, N., Bywater, T., Gridley, N. & Daley, D. Evaluating the Incredible Years Toddler Parenting Programme with parents of toddlers in disadvantaged (Flying Start) areas of Wales.

Abstract

Background: High-levels of child behavioral problems in disadvantaged communities have resulted in increased investment in these areas by the UK government. The Flying Start initiative was introduced in Wales to provide additional services for the families of young children aged 0-3. The initiative promised an annual investment of £2000 per child, to be spent on additional health visitors, basic skills/language and play groups, free crèche provision for children from their 2nd birthday and evidence based parenting programmes.

Objectives: To evaluate the effectiveness of the newly developed Incredible Years (IY) Toddler parenting programme in disadvantaged Flying Start areas of Wales.

Design: Randomised controlled trial. Data was collected at three time-points with each time point six-months apart. This paper reports on the outcomes at the first post-intervention follow-up.

Setting: This is a community-based study, set in eight designated disadvantaged Flying Start area across North, Mid and South Wales, UK.

Participants: Eighty-nine families with a child aged between 12-36 months at baseline. Participants were randomly allocated to intervention and waiting list control groups on a 2:1 ratio, (60 Intervention: 29 Control) with children stratified by age and sex.

Intervention: The IY Toddler Parenting programme (Webster-Stratton, 2008) is a 12-week group-based parenting programme that aims to promote children's development and encourage positive parenting practices. The intervention was delivered within regular Flying Start community service settings by the local staff with strict attention to fidelity.

Main outcome measures: The primary outcome measure was child development,

assessed using the Schedule of Growing Skills II. Secondary outcomes were parental mental health, parent-child interaction, parent competencies and quality of the home environment.

Results: No significant improvements were seen on measures of child development. Significant improvements were seen in parent well-being at 6-month follow-up for intervention parents when compared to control families using analysis of covariance. No significant differences were seen on measures of parent depression, parent stress, quality of home environment and observed negative parenting, child deviance language promotion or positive parenting using analysis of covariance. Further exploratory analysis of observational data, where changes in intervention and control group were analysed separately, saw significant reductions in negative parenting practices for intervention families, with no change for controls using paired t-tests.

Conclusions: The RCT demonstrated positive intervention effects for maternal mental wellbeing when comparing intervention participants to controls, with an additional reduction in negative parenting, in the absence of control group comparison. However, improvements were also seen across a range of measures for control families, indicating that all families in the trial were benefiting from living within an Flying Start area.

Insufficient evidence was gathered concerning uptake of all components of the Flying Start initiative to determine the components of the observed changes.

Introduction

The life trajectory of children who demonstrate early behavioural and oppositional behaviour can be bleak (Allen, 2011a). Short-term negative outcomes can include low educational attainment and poor peer relationships (Webster-Stratton & Lindsay, 1999) as well as delayed development (Hobcraft & Keirnan, 2010). Long-term difficulties of anti-social and oppositional behaviour into adulthood can result in unemployment, mental health difficulties and/or criminal activity (Farrington, 1992; Farrington, 1995; Patterson, Debaryshe & Ramsey, 1989) and drug abuse (Kazdin, 1987). An estimated 5% of the male UK child population meet the criteria for a diagnosis of conduct and/or oppositional defiant disorder (Ford, Goodman & Meltzer, 2003; National Institute for Health and Clinical Excellence 2000; 2006). The estimated lifetime cost to society of a child with conduct disorder is estimated at around ten times higher than for a child without these early behavioural problems (Romeo, Knapp & Scott, 2006; Scott, et al. 2001; The Police Foundation, 2010) and consequently, the disruption and prevention of children entering this pathway has become a key concern for government and researchers (Allen, 2011a).

Children who live in poverty, come from large families, single-parent families and/or from ethnic minorities have an increased risk of behavioural difficulties (Caspi, Taylor, Moffitt, & Plomin, 2000; Keirnan & Mansah, 2009; Webster-Stratton, 1998; Webster-Stratton & Hammond, 1998). With all of these factors frequently co-occurring in disadvantaged communities across the UK (Welsh Government, 2011), the number of children at risk of behavioural and the associated emotional difficulties in these areas has been estimated as being much higher (Allen, 2011a; Allen, 2011b; Waldfogel & Washbrook, 2008). There is also evidence that stress resulting from deprivation can impact on parenting style (Conger, Ge, Elder,

Lorenz & Simons, 1994; Ghate & Hazel, 2002; Keirnan & Mensah, 2011; Patterson, Debaryshe & Ramey, 1989; Patterson & Forgatch 1995; Waylen & Stewart-Brown, 2010) with negative parenting practices or unresponsive parenting having a significant impact on the biological make-up and, consequently, the building blocks of children's brains (Cicchetti, Rogosch, Gunnar and Toth, 2010; Patterson, 2011; Schonkoff, 2010) leaving children poorly equipped to succeed in later life (Centre on the Developing Child, 2007).

Poor parenting skills including critical, harsh and coercive parenting have been associated with increased child behavioural problems (O'Connor & Scott, 2006; Patterson & Southamer-Loeber, 1984; Webster-Stratton & Hammond 1998). Conversely, *effective* parenting has been demonstrated to be a key protective factor against the development and maintenance of child behavioural problems, (Hutchings et al. 2007; Patterson & Forgacht, 1995); Keirnan & Hobcraft, 2010; Keirnan & Mensah, 2011). As a result, group based parent training is now the recommended treatment for child Conduct Disorder. (National Institute of Clinical Excellence, 2006).

Evidence clearly suggests that the early years of a child's life are highly formative. Coupled with the fact that there are significant benefits of increasing positive parenting practices for children displaying early signs of behavioural and the associated emotional difficulties, it seems logical that improving parenting skills as early as possible when children are more receptive to change would be advantageous (Kazdin, 1993; Shonkoff & Phillips, 2000). This need for early intervention is considerably greater within disadvantaged communities where the risks of poor child outcomes are considerably higher (Field, 2010), yet significant benefits have been

reported with this high-risk population following early intervention (Eckenrode et al., 2010; Olds et al., 1998).

Over the last 40+ years a considerable amount of research has been conducted exploring the impacts of positive parenting on child behaviour and this has resulted in the development of a multiplicity of parent-training interventions of which only relatively few have a strong evidence base (Gardner, Hutchings & Lane, 2004; Hutchings, Gardner, Lane and Williams in press). Evidence of effective, and cost effective, parenting programmes is increasing (Barlow, Smailagic, Ferriter, Bennett & Jones, 2010; Charles et al., 2011) enabling policy makers and practitioners to select the most effective programmes (Children's Workforce Development Council, 2011; Webster-Stratton, Mihalic, Fagan, Arnold, Taylor, & Tingley, 2001).

The Incredible Years (IY) parent programmes are a series of programmes developed for parents, and teachers and children (Webster-Stratton, 1996). They have strong evidence of effectiveness (Mihalic et al. 2002) and are one of only eleven recognised Blueprints for Violence Prevention status. The IY series has been extensively researched using rigorous randomised control trial (RCT) designs and their effectiveness has been demonstrated in the short-term with clinical samples (Hutchings et al. 2007; Larsson, Fossum, Clifford, Drugli, Handegard & Mørch, 2008; Patterson, Barlow, Mockford, Klimes, Pyper & Stewart-Brown, 2002; Reid, Webster-Stratton & Baydar, 2004; Scott, Spender, Doolan, Jacobs & Aspaland, 2001; Webster-Stratton, 1998), with effect maintained over the longer term (Bywater et al. 2009; Drugli, Larsson, Fossum & Mørch, 2009; Reid, Webster-Stratton & Hammond, 2003; Scott, 2005; Webster-Stratton, Rinaldi & Reid, 2010), for more information, see www.incredibleyears.com.

There is clear evidence for the cost effectiveness of the IY parent training (Charles, Bywater & Edwards, 2011; Edwards, Ceilleachair, Bywater. Hughes & Hutchings, 2007; O'Neill, McGilloway, Donnelly. Bywater & Kelly, 2011; Scott, O`Connor & Futh, 2006;). This, coupled with recognition of elevated levels of antisocial behaviour and risks to poor child outcomes in disadvantaged areas, has resulted in the incorporation of the IY parenting training programmes into community wide government strategies including the UK Government's flagship intervention, Sure Start. In 2007 the Welsh Government (Welsh Government) introduced a Flying Start (FS) programme (Welsh Government, 2009) in the most deprived communities in Wales.

Flying Start is a universal intervention for families in disadvantaged communities. Funding provides four core components; parent training, additional health visitor support from HVs with reduced caseloads, language and play courses and free child-crèche spaces. Flying Start provides a £2000 per annum investment per child for all children from birth to three years. Eligibility for Flying Start services is dependent on living within targeted postcode areas, selected using the Welsh Index of Multiple Deprivation (2005) and having a school catchment area with high levels of free school meal entitlement. The current independent evaluation explores the effectiveness of the IY Toddler parenting programme [IYTPP] (Webster-Stratton, 2008) that was developed as a preventative programme for use with parents of toddlers in disadvantaged Flying Start community setting.

This paper presents the short-term (6-month post baseline) findings of an RCT jointly funded by the Welsh Government and a Coleg Cymraeg Cenedlaethol studentship. It was predicted that parents` attendance on the programme would have a positive impact on a child's development, that negative parenting practices, such as

critical parenting, would be reduced and that positive parenting would be increased. In line with previous findings from similar research in disadvantaged Sure Start areas in Wales (Hutchings et al. 2007) it was also predicted that there would be positive changes in parental mental health.

Method

Study Participants

Eighty-nine parent-child dyads from Flying Start areas in North, Mid and South Wales were recruited. Sixty families were randomly allocated to the intervention group, and 29 to a waiting list control group.

Recruitment & Inclusion Criteria

Participating families were identified by local Flying Start staff and recruited to the trial by researchers. Participants were eligible for inclusion if they were living in a designated Flying Start area, had a child aged 12 to 36 months and were able to attend a parenting course that would be starting either immediately or in six-months time.

Group Allocation

Following baseline data collection, participating dyads were randomised using a remote dynamic allocation randomisation service provided by an independent trials unit. Participants were randomised on a 2:1 ratio to either intervention or waiting list control condition. Participants were stratified for child age (one year olds and two year olds), sex and research area.

Intervention

The recently developed Incredible Years Toddler parenting programme (IYTPP: Webster-Stratton, 2008) is a 12-week programme for parents of children aged 1-3 years. This was the first evaluation of the IYTPP The programme uses the

same underpinning social learning theory principles and effective components as the strongly evidence based IY Basic parent programme (Hutchings, Gardner and Lane, 2004; Mihalic et al. 2002; Webster-Stratton & Hancock, 1998). The group structure format includes group discussion, observation of parents and children in video vignettes, role-play practice and home-based practice activities. Sessions are approximately two hours long and designed for attendance by up to 12 adults. Programme content covers eight key areas of parenting skills (see Chapter 2 for a full description of the intervention)

While the IYTPP has yet to be evaluated by RCT, the IY Basic programme (Webster-Stratton & Hancock, 1998), on which much of the IYTPP is based, saw improvements in parenting style and efficacy when used with children aged 2-3 years (Gross et al., 2003) indicating the effectiveness of another version of the IY parenting programme with children in the toddler years. The IYTPP has itself also seen positive impacts when delivered to a small sample of nursery staff (Bywater et al., 2011).

Facilitators

The IYTPP intervention was delivered by trained facilitators within the Flying Start setting. Group leaders were a combination of health visitors and childcare practitioners. Facilitators had attended a three-day IY Basic parent group leader course and, for those not recently trained, an additional one-day Toddler training day was provided.

Fidelity

Adherence to programme content was encouraged by providing the group leaders with standardised IYTPP manuals and materials. In addition, group leaders completed weekly checklists detailing which components of the session had been covered. Facilitators attended weekly supervision sessions to enhance fidelity, led by

an IY trainer or mentor. All group sessions were video-recorded and these recordings were shown and discussed during supervision along with planning delivery of the next session. Group-leaders completed weekly content check-lists, and overall 90% of programme content was covered.

Measures

Measures were administered at three time-points, at six-month intervals by researchers blind to condition. All measures used were validated and standardised.

Family demography, parent mood and competence

Family demographic and cumulative risk information was collected using the Personal Data and Health Questionnaire (PDHQ; Hutchings, 1996). Information concerning parental mental health, well-being and competence was collected using the Beck Depression Inventory II (Beck, Ward, Steer & Brown, 1996), the Warwick Edinburgh Mental Wellbeing Scale (NHS Health Scotland, 2006), the Parenting Stress Index: Short-Form (Abidin, 1990) and the Parenting Sense of Competence (Johnston & Mash, 1989).

Child development

The primary outcome measure for the project was the child developmental quotient assessed by researcher administration of the Schedule of Growing Skills II (SGS II: Bellman, Lingham & Aukett, 1996). This developmental screening tool was scored using the Hutchings developmental quotient (DQ) scoring method (Williams et al. submitted). The SGS II combines direct assessment and parent report and is administered by a trained administrator. SGS II is a screening tool intended for used by Health Visitors during regular health checks in the child's first five years of life. In Wales it was chosen by the Welsh Government as the tool for assessment of developmental progress of children living in Flying Start areas.

Parent-child interaction

The quality of parent-child interaction was researcher assessed by a 30-minute blind observation of a free play session in the home, using a modified version of the Dyadic Parent-Child Interaction Coding System (Eyberg & Robinson, 1981; Webster-Stratton, 2000). Three additional categories were used when evaluating the IYTPP that assessed the coaching of language skills. All other categories were omitted due to low frequency counts or irrelevance to child age. Coder inter-rater reliability for the additional categories was high: Verbal Questions 72%, Verbal Labeling 92% and Communication Coaching 73%.

Home environment measure

The quality of the home environment was assessed using the Infant/Toddler Home Observation for Measurement of the Environment Inventory IT-HOME (Caldwell & Brady, 2003).

Procedure

Data collection points were at six-monthly intervals, baseline and 6-month follow-up. Intervention families were offered intervention as soon as baseline data had been gathered, while control families were offered a place on an IY parent programme after the 6-month follow-up. Each data collection point consisted of two home visits for each family. During the first visit demographic data, parent report measures and child developmental assessment were administered. This took approximately 1.5 hours. Observation of parent-child interaction took place during the second home visit as did completion of the IT HOME inventory, and took approximately 1hour.

Data analysis plan

Analysis of covariance was conducted for all outcome measures, comparing intervention participants with waiting-list controls, controlling for baseline scores and using research centre as a covariate for all outcome measures. Child age and sex were included as additional covariates for measures of child development. Data was analysed using intention to treat data, whereby the scores of families who were lost to follow-up were carried forward with the assumption of no-change.

Effect sizes for the main analysis (see Table 6.3) were calculated using Hedge's g. Hedge's g is calculated by dividing the differences of the estimated marginal means for the treatment conditions by the square root of the error mean square for treatment condition. By using the estimated marginal means the effect size is a better estimate of the intervention effect as it takes into consideration the additional factors entered into the model for the Analysis of Covariance (e.g. research centre, child age and child sex).

Results

Participants

Eighty-nine parent-child dyads were recruited across eight Flying Start centres in North, Mid and South Wales. Children had a mean aged of 21.19 months (SD= 6.29) at baseline and there were 52 Males and 37 Females. Two of the 89 parents or primary caregivers were male and parents' mean age was 28.97 years (SD= 6.72). Seventeen per cent of parent/primary caregiver reported Welsh as their child's preferred language, with seven per cent reporting bilingual. Responses to this question determined the language used during the developmental assessment.

The prevalence of some risk-factors associated with negative child outcomes are illustrated in Table 6.1. The sample was experiencing relatively high levels of deprivation as well as risk factors of poor mental health, high levels of stress and cumulative risk index compared to national averages, suggesting that parents and children of the participating families represented a range of risk for subsequent problems. A full description of the baseline characteristics can be found elsewhere (Griffith, Hutchings & Bywater, Chapter 5) along with a comparison of baseline data from this study and a sample drawn from a similar population in Wales. When the current sample was compared to a sample of parents and children recruited for a similar RCT of a parent training intervention from Sure Start (SS) centres in North & Mid Wales, see Hutchings et al. (2007) it emerged that families recruited for the current study had a lower level of associated risks than for the earlier Sure Start study.

Table 6.1. Baseline characteristics of the Flying Start sample.

	Intervention	Control
	Mean (SD) or %	Mean (SD) or %
Child age (months)	21.10 (7.28)	21.45 (6.22)
% Boys	56.7%	37.9%
Parent age (years)	28.58 (7.03)	29.79 (6.060
% of fathers	3.3%	0%
Living below poverty line [a]	63.3%	55.2%
Single parent	58.3%	31.03%
2 or > risks [b]	60%	44.83%
Developmental delay[c]	25%	17.2%

[a] Below WG defined poverty level of £83 per adult and £78 per child
[b] SED6 score (2or > indicated elevated risk)
[c] DQ score < 85 at baseline SGS II

Group Equivalence at Baseline

Independent t-tests were carried out to assess any differences between families allocated to intervention and control on all outcome measures at baseline to ensure

groups were matched and no significant differences were found on any measures at baseline. Results are presented below in Table 6.2.

Table 6.2.

Group Equivalence on Baseline Measures by Independent t-Test.

Measure	Intervention M (SD)	Control M (SD)	P value
SGS II	94.29 (13.72)	98.87 (17.79)	.184
BDI II	10.13 (8.36)	12.24 (11.38)	.33
WEMWBS	47.37 (10.18)	48.86 (11.41)	.53
PSI-SF	75.43 (20.23)	77.21 (21.50)	.71
PSOC	61.05 (8.63)	62.31 (9.94)	.55
IT-HOME	34.62 (6.68)	35.07 (5.52)	.76
SGS DQ	94.29 (13.72)	98.89 (17.79)	.184
POSITIVE PARENTING	60.07 (27.83)	48.54 (23.37)	.09
NEGATIVE PARENTING	20.93 (20.36)	20.29 (14.52)	.89
LANGUAGE PROMOTION	44.66 (29.92)	39.25 (37.56)	.867
CHILD DEVIANCE	19.93 (25.27)	12.33 (11.66)	.17

*significant at .05 level
**Significant at .001 level

Take-up of parenting intervention

Mean number of sessions attended was 7.43 (SD 4.10) with 60% of the intervention sample attending eight or more sessions. Parents reported high levels of satisfaction with overall delivery of the parenting programme (Webster-Stratton, 2008; see Appendix L for parent satisfaction report).

Outcomes at 6-month follow-up

Follow-up scores of intervention and control families were then compared; data are presented in Table 6.3.

Table 6.3.

Analysis of covariance for all outcome measures 6-months post intervention

Measure	Intervention Families (n=60)		Control Families (n=29)		Differences between groups	
	BL M (SD)	FU1 M (SD)	BL M (SD)	FU1 M (SD)	P-value	Effect Size[$]
SGS II [§]	94.29 (13.72)	99.20 (18.27)	98.87 (17.79)	102.38 (17.79)	.51	0.17
BDI-II	10.13 (8.36)	7.08 (7.11)	12.24 (11.38)	9.96 (7.11)	.28	0.25
WEMWBS	47.37 (10.18)	50.95 (8.61)	48.86 (11.41)	47.83 (10.41)	.01*	0.57
PSI-SF	75.43 (20.23)	68.15 (18.24)	77.21 (21.50)	69.55 (20.49)	.93	-0.02
PSOC	61.05 (8.63)	64.07 (7.88)	62.31 (9.94)	63.78 (9.02)	.53	0.15
IT-HOME	34.62 (6.68)	37.38 (5.51)	35.07 (5.52)	37.34 (4.79)	.73	0.08

*significant at .05 level
**Significant at .001 level
§ Child age and sex included in model (non-significant predictors of Child DQ at FU 1).
$ Effect size calculated using Hedge's g (see Data analysis plan for a description of Hedge's g calculation)

Analysis of Covariance (ANCOVA) revealed significant differences and a medium effect size between intervention and control groups on the measure of parental well-being (WEMWBS) at six month follow-up, see Figure 6.1. Measures of child developmental quotient (SGS II), parent reported depression (BDI-II), parental competence (PSOC), parental stress (PSI-SF) and quality of home environment (IT HOME) showed improvements in intervention groups in these domains, however, similar improvements were see in control families, this coupled with large group variance, resulted in non-significant differences at follow-up between the two groups. The covariate of research centre did not significantly predict any of the outcome measures.

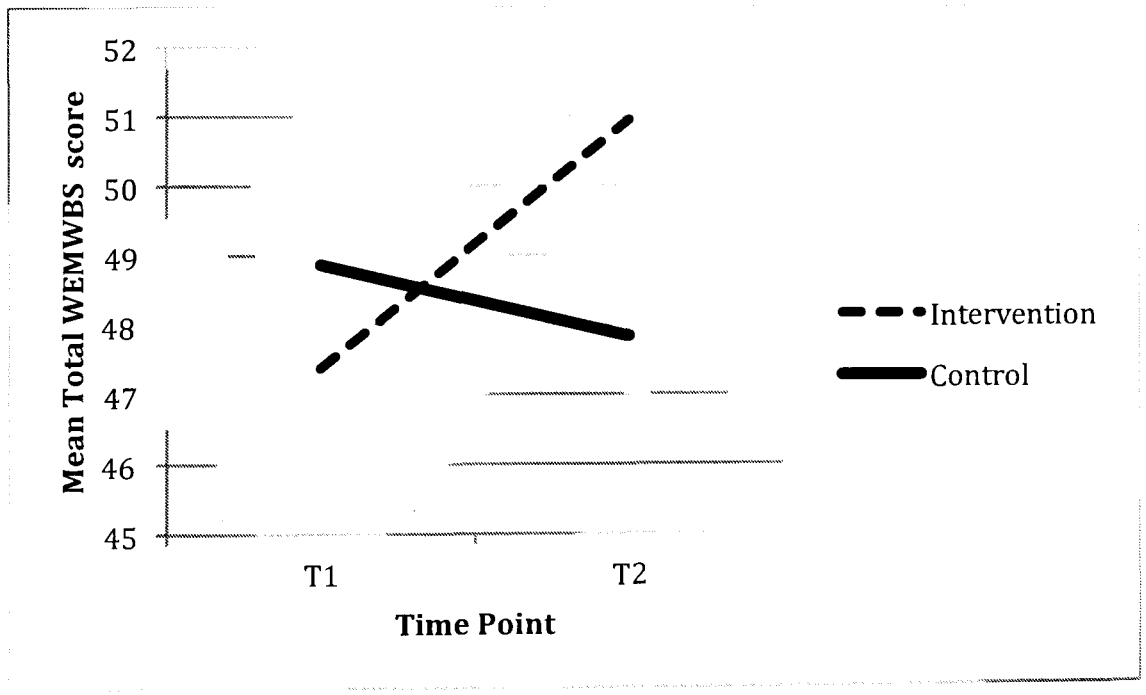

Figure 6.1. Changes in parent self-reported mental well-being for intervention and control 6-months post intervention.

Parent-child interaction outcomes.

Initially, Analysis of Covariance (ANCOVA) was carried out with analysis controlling for baseline scores, and using research centre as the covariate. No significant differences emerged using ANCOVA between intervention and control

groups. Subsequently, paired t-test were carried out to see if there were any differences between baseline and follow-up subscale scores for the intervention and control groups separately, results of which are displayed in Table 6.4.

Table 6.4.

Changes in observed interaction for intervention and control participants using Paired t-test.

Subscale	Intervention Families (n=44)				Control Families (n=23)			
	BL M (SD)	FU1 M (SD)	P	Effect Size (r)	BL M (SD)	FU1 M (SD)	P	Effect Size
POSITIVE PARENTING	60.07 (27.83)	53.07 (25.70)	.117	0.24	48.54 (23.37)	44.13 (18.99)	.28	0.23
NEGATIVE PARENTING	20.93 (20.36)	12.80 (12.19)	.01*	0.38	20.00 (14.77)	17.70 (17.39)	.55	0.13
LANGUAGE PROMOTION	40.66 (29.92)	47.39 (40.49)	.25	0.18	40.17 (38.12)	43.04 (34.91)	.72	0.08
CHILD DEVIANCE	19.93 (25.27)	11.14 (13.80)	.007*	0.40	11.65 (11.43)	9.26 (8.91)	.47	0.16
CHILD DEVIANCE (revised category)	4.59 (6.60)	3.18 (3.40)	.183	0.20	3.08 (2.96)	2.97 (3.43)	.78	0.06

*significant at .05 level
**significant at .001 level

Intervention families saw significant reductions in Negative Parenting and Child Deviance, with no such changes were seen for control families. Non-significant improvements were seen between baseline and follow-up 1 on observed language promotion, for both intervention and control group. There were no significant changes in positive parenting over time for intervention or control families, although there was a shift in the ratio of positive to negative parenting over time, with intervention families seeing the ratio of positive compared to negative parenting actions increased

from 74% to 81% post-intervention. The change in the control group was more modest from 72% to 73%.

It is however worth noting that the standard deviation of the observed child deviance category was large. Upon closer inspection of the individual categories that were summed to make the child deviance sub-scale (child physical negative, destructive behaviour, smart talk and cry whine yell) the cry, whine, yell category had a large range, particularly at baseline, indicating that for children of this young age it was not possible to code the category in a way that was reliable and meaningful. As a result the category 'cry, whine, yell' was removed from the child deviance sub-scale, as the large range of scores was distorting the mean. Re-analysis found that the change in child deviance for the revised child deviance sub-scale was no longer significant for intervention families.

In conclusion, analysis of covariance found significant improvements for intervention families when compared with control families on a measure of parental well-being. Further post-hoc analysis of observational data saw significant reductions in negative parenting practices for intervention families but not for control families when the two groups were analysed separately.

Discussion

Short-term findings from the RCT evaluation of the effectiveness of the IYTPP demonstrated benefits to parental mental-wellbeing relative to control parents over a 6-month period. Non-significant differences were found when comparing intervention and waiting-list control families on all other measures. Further exploratory analysis of observational data saw reductions in negative parenting practices and child deviance over a six-months period for families allocated to the

intervention group, with no such change present for families allocated to the control group. Study findings indicate that the IYTPP has modestly positive effects in the short-term when delivered as part of universal provision for disadvantaged families.

While control families experienced a decline in parental well-being, positive changes were seen on all other measures (apart from positive parenting where no-change was seen) indicating that over the six-month period some other factors were having a beneficial impact on the control participants. It is possible that these improvements were a result of the community wide Flying Start intervention, of which the IYTPP was only one of four components offered to parents as part of the universal service.

Research suggests that it is families with the greatest needs that tend to show largest improvement (Reid, Webster-Stratton & Baydar, 2004; Scott, 2005). The baseline characteristics of the current sample as reported by Griffith et al. (Chapter 5) suggest that the families recruited had a varying level of need in terms of economic deprivation, parental mental health, stress as well as child developmental level (Griffith et al., Chapter 5) illustrated by the large variability around scores. A large proportion of the children were typically developing for their age. Only small numbers of parents were scoring within clinically significant ranges for depression and stress and ratios of positive to negative parenting were high, suggesting that a ceiling effect was operating on several measures. For a sample that were relatively low-risk at baseline, changes in measures such as BDI-II and PSI-SF, that assess clinical levels of depression and stress, may not have been appropriate for assessing the effectiveness of an intervention for families recruited from the general Flying Start population.

In addition to the issues of ceiling and floor effect on parental measures, the selection of the Schedule of Growing Skills II (SGS II) as the main outcome measure was inappropriate for two reasons; firstly, the SGS II is a screening tool and by its nature is not sensitive to small changes as would be expected for a universal intervention. The Welsh Government, who were funding the trial stipulated that the SGS II be used as the main outcome to coincide with the use of the SGS II as part of their wider evaluation of the Flying Start initiative. Had this not been the case, a more detailed and sensitive measure of child development such as the Griffiths Mental Development Scales (Huntley, 1996; Luiz et al, 2006) would have been utilised as the child outcomes measure. Secondly, although the content of the intervention has a clear focus on promoting child development and raising parental awareness of child developmental milestones, the selection of a measure of child outcomes, particularly for use in a study of a universal intervention and for short-term follow-up, was inappropriate. The main goal of the intervention was to change parenting behaviour, consequently the selection of observational data of parenting behaviours would have been more appropriate, with the expectation that over time, changes in parenting behaviour would impact upon child outcomes.

When considered the necessary change in child developmental quotient that would be a meaningful effect size change, it is important to keep in mind the level at which the intervention was being evaluated. For a universal intervention aimed at improving child development an effect size of 0.2 would be considered satisfactory, which was almost achieved in this study (effect size for SGS II of 0.17 using Hedge's g calculation). For a universal intervention, a population wide improvement in child development of a 0.2 effect size would have significant public health implications. When considering what would be a meaningful magnitude of change for children with

clinical levels of developmental delay, a 0.5 effect size change would be considered functionally significant, in that it should result in sustained improvements (see Chapter 7 for further analysis of magnitude of change for children with developmental delay). The current study was evaluating a parenting intervention at a universal level, hence large changes in effect size would be unlikely. This is particularly true when using a measurement tool that was relatively insensitive to change and in light of the fact that this intervention was not a direct intervention to improve child cognitive abilities, but to change parenting behaviours.

As this was the first evaluation of the IYTPP, official power calculations were not used to determine sample size. Estimates of the number of families to be included were loosely based on the work of Hutchings et al. (2007) who saw large effect sizes when working with parents of children with clinical levels of behaviour problems. Baseline characteristic analysis suggested that these two samples were not comparable on indicators of deprivation, maternal depression and stress or multiple risk indicators, consequently, to achieve effect sizes comparable to Hutchings et al. (2007) with a sample of families with a varying level of need, much greater group differences would be required. This is supported by Gross et al. (2003) who state that larger sample sizes are required when exploring the effects of intervention on families of young children. The number of participants included in the study was also constrained by the limited research budget. The study was the first evaluation of the programme and the project aimed to investigate the feasibility of delivering the intervention across Wales in addition to exploring programme effects

Study Strengths

Study strengths include the use of a rigorous RCT design with 'blind to condition' data collection procedures and the use of an independent random

allocation. In addition, the roll out of the IYTPP was conducted in areas from across Wales, with satisfactory levels of attendance and completion of the parent-training programme, indicating that community wide roll out could be implemented effectively.

Study Limitations

Failure to gather sufficient information on level of uptake of the additional three components of the services provided as part of the community wide Flying Start initiative was a weakness of the study. The availability of this information would have enabled more detailed analysis and would have added some clarity when interpreting the improvements in control group, and consequently the whole sample over time.

In conclusion, the IYTPP was delivered as part of a community wide initiative and demonstrated modest improvements for intervention families in terms of parental well-being and negative parenting practices and reductions in child deviance. In addition the study also provides some evidence that living in an Flying Start area and having access to additional services may be responsible for improvements in child developmental quotient, improvements parent reported depression, stress and competence as well as quality of the home environment over a six-month period. Further analysis will be undertaken to explore longer-term benefits for intervention families and to explore whether there were differential effects for the subgroup of families who presented increased levels of deprivation and associated risk factors at baseline.

Key Messages

- It is possible to deliver parenting interventions, as part of universal services offered in disadvantaged communities, with satisfactory levels of attendance.
- Attendance on the IYTPP resulted in modest improvements on measures of parent-reported mental well-being when compared to control participants, with further exploratory analysis indicating a reduction in observed negative parenting for intervention families but not for controls when groups were analysed separately.
- Targeting disadvantaged geographical areas is insensitive to individual need within that area. A more sensitive, geographical approach is required in order to reach those families most 'in-need' in these areas.
- Despite using rigorous RCT design, lack of contextual data makes interpretation of findings difficult.

CHAPTER 7

STUDY 3

Outcomes from a geographically targeted randomised controlled trial of a parenting intervention for parents of toddlers aged 1 – 2 years: Longer-term outcomes and secondary analysis of outcomes for families differentiated by severity of risk-factors[3]

[3] This study formed the basis of a paper in preparation: Griffith, N., Hutchings, J., Daley, D. & Bywater Outcomes from a geographically targeted randomised controlled trial of a parenting intervention for parents of toddlers aged 1 – 2 years: Longer-term outcomes and secondary analysis of outcomes for families differentiated by severity of risk-factors.

Abstract

A randomised controlled trial conducted across Wales to evaluate the effectiveness of the recently developed Incredible Years Toddler parenting programme saw modest short-term improvements in terms of maternal mental well-being relative to control families. The intervention was delivered as part of the Welsh Government community wide Flying Start initiative for disadvantaged families. This paper reports on longer-term (12-months post-baseline) outcomes for intervention families only and also explores how outcomes for children of families that were experiencing the highest levels of risk compared with those of lower risk families.

Significant improvements were found for the intervention sample as a whole at twelve-month follow-up in child developmental status, parental mental well-being, and competence and quality of home environment with significant reductions in parental stress and depression. Exploration of the proportion of families experiencing at least medium sized effects saw comparable and in most cases a greater proportions of families with the highest levels of baseline risk, as defined by five different, potential risk factors, realising these effect sizes. Further analysis of these differences saw only few statistically significant differences. This was not a surprising finding considering the small sample size the group sizes.

The study lends support to the argument that in times of economic constraints it is important to target services on families whose children are at greatest risk of poor long-term outcomes. The paper suggests additional measures that could be used to target services to ensure that resources are allocated to families with the greatest needs *within* disadvantaged areas.

Introduction

Without intervention many children who exhibit early childhood behavioural problems continue to lead highly problematic lives into adolescence and adulthood (Colman et al., 2009; Patterson, Debaryshe & Ramsey, 1989). Teaching effective positive parenting practices has been demonstrated to be highly effective in reducing such problems (Hutchings et al., 2007; Webster-Stratton, 1998). The prevalence of early behavioural problems is significantly higher in areas with high levels of socio-economic disadvantage (Attride-Stirling, Davis, Day & Sclare, 2000; Caspi, Taylor, Moffitt, & Plomin, 2000; Webster-Stratton & Hammond, 1998) with poverty identified as a key factor that affects parental capacity to parent in a positive manner (Ghate & Hazel, 2002; Keirnan & Mensah, 2011; Mensah & Keirnan, 2009; Patterson & Forgatch, 1995; Webster-Stratton, 1990; 1998). Several other risk-factors for early childhood behavioural problems also occur more frequently in disadvantaged areas, including lone-parenthood, low parental educational attainment, and high levels of parental depression and stress, particularly among mothers (Emerson & Einfeld, 2010; Office of National Statistics, 2007; Welsh Government, 2011).

Group based parent-training programmes can effectively reduce child problem behaviour by modifying parent behaviour (McMahon & Forehand, 2003). Furthermore families with elevated levels of risk, can fare equally well, if not better, in such programmes on both child and parent outcomes if interventions that have key collaborative ingredients alongside a core social learning theory curriculum (Gardner, Hutchings, Bywater & Whitaker, 2010; Reid, Webster-Stratton & Baydar, 2004; Scott, 2005), with reductions in problem child behaviour effectively maintained in the longer-term (Bywater et al. 2009; Drugli, Larsson, Fossum & Morch, 2009; Reid,

Webster-Stratton & Hammond, 2003; Webster-Stratton, Rinaldi & Reid, 2010; Scott, 2005)

The UK Government has invested heavily in the provision of child and family services in economically deprived areas to tackle the high-levels of childhood behavioural problems in such communities and to disrupt the inter-generational cycle of disadvantaged children becoming poor parents. (Allen & Duncan-Smith, 2009; Belsky, Barnes & Melhuish, 2007). In 2007, the Welsh Government (WG) launched a new initiative for families with young children: Flying Start (FS). The Flying Start initiative provided a £2000 per annum investment for each child aged 0-3 years, who lived in an area identified by the Welsh Government as highly disadvantaged. Investment was for the provision of parent training programmes, increased health visitor support, free child-care provision and language and play courses. Also, in 2007 the Welsh Government funded a small independent randomised controlled trial evaluation of the parent-training component of the initiative (Hutchings et al. see Chapter 6). The Welsh Government issued guidance on which evidence-based parent training programmes were suitable for delivery, and the newly developed Incredible Years Toddler Parenting Programme was included (IYTPP: Webster-Stratton, 2008).

Hutchings et al. (chapter 6) recruited 89 families to evaluate the effectiveness of the IYTPP. Although families were recruited from areas identified by the Welsh Government as highly disadvantaged, they displayed varying levels of need on a range of baseline characteristics associated with poor child outcomes (Griffith, Hutchings, Daley & Bywater, Chapter 5). Families were randomly allocated to intervention or control group status on a 2:1 basis. Outcomes for families that received the IYTPP were compared with those of control group families six-months post-baseline. Improvements were seen on all outcome measures for the whole

sample when they were analysed as one unit and significant benefits of intervention relative to control families were found for improved parental well-being and reduced negative parenting (see Hutchings et al., Chapter 6 for further explanation).

In the present paper outcomes for intervention families at 12 months post-baseline are explored to see whether previously reported changes in parental well-being have been maintained and/or whether any additional significant improvements have emerged. The current study hypothesised that trial completers would see improvements in children's developmental status at 12 months post-baseline as a result of their parents attending the IYTPP because of the short-term (six month post-baseline) significant improvements in parental maternal mental wellbeing and significant reductions in negative parenting. The study also hypothesised that these benefit would be greatest in the families with the greatest level of risk at baseline who had most to gain from attendance on the programme.

Given the previously reported range of risk-factors within the sample (Griffith et al., Chapter 5) and the evidence that families experiencing elevated levels of risk have seen greater improvements following intervention using the IY parent programme (Gardner et al., 2010; Reid et al., 2004; Scott, 2005) this paper explores whether the intervention works differentially for families experiencing elevated levels of poverty, multiple socio-economic risks, signs of early child developmental delay and clinical levels of parental depression and stress relative to those with lower levels of risk. The aim is to see whether the intervention has particular benefits for those families with elevated baseline levels of risk-factors known to affect child outcomes as was found by Gardner et al. (2010) for outcomes from the IY parent programme with parents of older children with clinical levels of behavioural problems.

Method

Study Participants

Forty-two parent-child dyads from Flying Start areas in North, Mid and South Wales were included in this analysis. The 42 trial completers, for whom 12-month data existed, represented 70% of the original 60 intervention participants. Participants had been randomly allocated to the intervention condition using a remote dynamic allocation randomisation service. The families had been previously recruited to participate in an RCT of a parenting intervention for toddlers (Hutchings et al., Chapter 6).

Recruitment & Inclusion Criteria

Participants were included in the original trial if they lived in a designated Flying Start area, had a child aged 12 to 36 months at baseline and were able to attend a parenting course that would be starting immediately. In addition, for the purpose of the present study, families must have provided data at baseline and 12-month follow-up. At this stage the sample consisted of intervention families only (control families were offered intervention after six-month follow-up data had been collected and no further data were collected from them).

Intervention

The intervention offered to parents was the recently developed Incredible Years Toddler parenting programme (IYTPP: Webster-Stratton, 2008) see Chapter 2 for a full description of the intervention.

Measures

The full battery of measures are described in Chapter 3, and includes the Schedule of Growing Skills II (SGS II: Bellman, Lingham & Aukett, 1996) as the measure of child outcomes. Parent report measures were used to assess parental

mental health; the Warwick Edinburgh Mental Wellbeing Scale (NHS Health Scotland, 2006) and the Beck Depression Inventory II (Beck, Ward. Steer & Brown. 1996). Parent stress was measured using the Parenting Stress Index: Short-Form (Abidin, 1990) and parent competence was measured using the Parenting Sense of Competence (Johnston & Mash, 1989).

Quality of home environment was measured using the Infant/Toddler Home Observation for Measurement of the Environment Inventory (IT-HOME: Caldwell & Brady, 2003). In addition, a wealth of demographic data was collected using the Personal Data and Health Questionnaire (PDHQ: Hutchings. 1996).

Procedure

Data collection points were at six-monthly intervals, intervention families were visited at home over three time-points, baseline. 6-month follow-up and 12-month follow-up, with the intervention delivered between baseline and six-month follow-up. Data was collected in the families home.

Data analysis plan

Long-term effects

To analyse longer-term changes in the 42 trial completers, paired sample t-tests were carried out on baseline and 12-month follow-up scores. Effect sizes were also calculated to measure the magnitude of change.

Risk-factors

Due to the range of risk factors for poor child outcomes within the sample, factors known to be associated with adverse effects on children were used to split the sample between low- and high-risk families on a number of characteristics. This was done to enable exploration of whether there were differences in outcome between families who were experiencing elevated levels of certain risk-factors, and those who

were not. The criteria used to define high or low-risk are displayed in Table 1, along with the percentage of sample classified as 'high-risk' on each of the factors. Percentages of families classified as 'high-risk' are also presented for the 18 families originally assigned to intervention group, who did not provide the research team with follow-up data. Data indicate that the 70% of families who were retained in the study at twelve-month follow-up (n=42) had comparable levels of risk, suggesting that there was no distinguishing risk-factor associated with families lost to follow-up at this stage.

Results

Baseline characteristics and analysis of group differences between the 42 trial completers who supplied data at baseline through 12-month follow-up and the 18 intervention families lost to follow-up are displayed in Table 7.1. Families who completed the trial (n=42) and families lost to follow-up (n=18) were comparable on the majority of baseline characteristics, with differences emerging in parent age and parent reported depression at baseline. The mean parent age at baseline was higher for trial completers than for families lost to follow-up, and none-of the families who were lost to follow-up had clinically significant levels of depression at baseline. The mean number of group sessions attended for trial completers was 8.37 (SD 3.49), with 71.4% of parents attending seven or more sessions.

Table 7.1

Baseline characteristics for the original sample and trial completers

Family Characteristic	Definition of high-risk	Lost to follow-up (N=18)	Trial Completers (N=42)	P- Value
		Mean (SD) or %	Mean (SD) or %	
Child age (months)[a]	N/A	21.17 (7.63)	21.02 (7.22)	0.95
Parent Age (years)[a]	N/A	24.22 (5.78)	30.5 (6.73)	0.001**
% Boys[b]	N/A	61%	55%	0.78
% Fathers as main carers[b]	N/A	5%	2%	0.51
WG Poverty Indicator[b]	Weekly income after housing costs of < £322[§]	61.1%	64.30%	1.00
SGS II: Child Development[b]	DQ < 85 on ≥ 2 SGS II sub-scales	22.2%	26.2%	1.00
SED5: Multiple Environmental Risk[b]	≥ 2 of the 5 Environmental risks	38.9%	40.50%	1.00
BDI II: Clinical Depression[b]	Total depression ≥ 20	0%	21.40%	0.05*
PSI-SF: Clinical Stress[b]	Total stress ≥ 90	11.10%	21.40%	0.48

*significant at .05 level
**Significant at .001 level
[a] Significance value calculated using independent-samples t-test
[b] Significance values calculated using chi-square statistic as data is nominal (P-vales reported are Fisher's exact test)
§ Based on family of four, which equates to < £83 per adults & < £78 per child

Paired t-tests were conducted and effect size changes calculated on all outcome measures between baseline and 12-month follow-up for all 42 families, results of which are presented in Table 7.2. Significant improvements over the 12-month period were seen on all measures suggesting positive improvements of the effect of the IYTPP in the longer term, with a small effect seen for parenting stress

and medium and large effect sizes seen for trial completers on all other outcome measures.

Table 7.2

Paired-t analysis of change in mean scores and effect size changes from baseline to 12-month follow-up (n=42).

	Baseline	12-month FU		
Measure	M (SD)	M (SD)	P-value	Effect size§
BDI II	11.31 (9.28)	5.07 (7.03)	< .001**	0.66
WEMWBS	47.02 (10.05)	51.69 (7.86)	.001**	0.55
PSI-SF	77.10 (21.73)	67.81 (17.13)	.01*	0.42
PSOC	59.55 (55.00)	64.21 (8.20)	.002*	0.54
SGS II	94.98 (13.68)	111.81 (16.59)	< .001**	1.03
IT-HOME	35.60 (6.91)	40.79 (4.26)	> .001**	0.86

*significant at .05 level
**Significant at .001 level
§ Effect size for changes from baseline to follow-up 2 were calculated using Hedge's g where the mean of the paired differences is divided by the standard deviation of the paired differences (See Cooper & Hedges, 1994 for a rationale for the use of Hedge`s g with repeated measures design)

Indices of change were calculated for all measures from baseline to 12-month follow-up. Standard deviations were calculated for the baseline scores on parent report, child development and home environment measures, with 0.5 of one standard deviation change at follow-up indicating a medium effect and 0.8 of one standard deviation or more indicating a large effect. Over one third of families achieved a medium-sized positive change post intervention on all measures. The proportion of families experiencing large effect sizes was also high on several measures, in

particular child development measured using SGS II where 62% of families saw a 0.8 SD change over a 12-month time period (see Table 7.3).

Measure	*Whole sample*	Poverty status			Cumulative risk SED5			Child development			Parent Depression			Parent Stress		
	(n=42)	Poor (n=27)	Not Poor (n=15)	P-value	High-risk (n=17)	Low-risk (n=25)	P-value	Devel Delay (n=11)	Typical Devel (n=31)	P-value	Clinical depression (n= 9)	Minimal depression (n=33)	P-value	Clinical Stress (n= 9)	Low level stress (N=33)	P-value
	BL-FU2	BL-FU2	BL-FU2		BL-FU2	BL-FU2		BL-FU2	BL-FU2		BL-FU2	BL-FU2		BL-FU2	BL-FU2	
BDI II																
≥ .5 SD	*52.3*	63.0	33.3	0.11	58.9	48.0	0.54	54.6	51.7	1.00	88.9	42.4	0.02*	77.8	45.5	0.14
WEMWBS																
≥ .5 SD	*38.1*	44.4	26.7	0.33	35.2	40.0	1.00	54.6	32.3	0.28	77.8	27.3	0.02*	66.6	30.3	0.06
PSI-SF																
≥ .5 SD	*33.3*	37.0	26.7	0.73	47.1	24.0	0.18	36.4	32.3	0.72	55.5	27.3	0.13	88.9	18.2	<0.01 **
PSOC*																
≥ .5 SD	*44.7*	41.7	50.0	0.75	42.8	45.8	1.00	50.0	42.8	0.04*	62.5	40	0.26	55.5	41.3	0.71
SGS II																
≥ .5 SD	*69.0*	77.8	53.4	0.16	82.4	60.0	0.18	90.9	61.3	0.13	100	60.6	0.04*	88.9	63.6	0.23
IT-HOME																
≥ .5 SD	*57.1*	66.7	40.0	0.12	70.6	48.0	0.21	72.7	51.6	0.29	77.8	51.5	0.26	55.5	57.6	1.00

Table 7.3 *Percentage of families who experienced medium effect size changes following intervention over time for the whole sample and for the sample split by low and high-risk indicators of poverty status, cumulative risk using SED5, child developmental delay and clinical levels of depression and stress. Significance level reported is Fishers exact test from Chi-square analysis of differences between high and low risk groups (See Table 7.1 for cut-off definitions for high versus low risk families).*

*significant at .05 level

**Significant at .001 level

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Analysis of differential effects for high and low risk families

Further analysis of data for families allocated to intervention, who provided data at baseline and twelve-month follow-up is illustrated in Table 7.3. The aim of the analysis was to explore the proportions of families categorised as low or high-risk on five key risk factors who had achieved at least a medium effect size change over the 12-month period along with chi-square significance tests for differences between high and low risk groups, to establish whether there were any differential effects of the intervention for high-risk families namely; poverty status, socioeconomic disadvantage indicators, child developmental delay and clinical levels of depression and stress.

The proportion of families who achieved at least a medium effect size change showing improvement on the measure of parental depression measured by the Beck Depression Inventory (BDI II) was greater for families who had been categorised as high-risk, than for families categorised as low-risk on all indices of risk,. Chi-square test of significance reporting Fisher's exact test however, indicate that although proportions were higher, differences between high and low risk families were only significant for families who were deemed high-risk in terms of clinical levels of parent reported depression at baseline, where 89% of the high-risk group achieved at least a medium effect size change compared to 42% of low-risk families. This was also the case for families of children who experienced at least medium effect size changes on child developmental quotient measured using the Schedule of Growing Skills (SGS II); the proportion of high-risk families who achieved medium effect size changes was greater than for low-risk families on all five indicators of risk, with 91% of families categorised as high-risk because of child developmental delay achieving at least minimal effect sizes compared to 61% of low-risk families. Again, when these

differences were tested for significance, differences were only statistically different for families categorised at high-risk in terms of clinical levels of parent reported depression at baseline.

A similar pattern was seen for the proportion of families experiencing at least medium effect size changes on a measure of parental stress (PSI-SF), with a greater proportion of high risk families experiencing medium effect sizes that families classed as low-risk on the five risk-factors. These apparent differences were only significant for families categorised as high-risk in terms of clinically significant levels of parent reported stress at baseline.

The proportion of high-risk families who saw at least medium effect sizes on a measure of parental well-being (WEMWBS) was greater for four out of the five risk-factors, however, when differences were tested for significance, the proportion of families achieving at least a medium effect size change was only significant for families categorised as high-risk because of clinically significant levels of depression (78% for the high-risk and 27% for low-risk).

The proportion of families who saw at least a medium effect size change on a measure of the quality of the home environment (IT-HOME) was greater for families considered high-risk on four of the five risk factors. None of these differences reached significance and a larger proportion of families categorised as low-risk in terms of parent reported clinical stress achieved medium effect sizes than the high-risk families.

On the measure of parental competence (PSOC), non-significant differences were seen between the proportion of families categorised as high or low-risk on any of the five risk-factors. The significant difference for parental competence seen here.

illustrates a difference in the proportion of low-risk families who did not achieve a medium effect size.

In conclusion, while the data demonstrated a greater proportion of high-risk families experience at least medium effect sizes in 27 of 30 comparisons with families categorised as low-risk on a range of risk-factors, tests of statistical significance only supported this in five cases.

Discussion

A previously reported RCT (Hutchings et al., Chapter 6) found modest short-term effects in terms of improved parental mental well-being for intervention families allocated to receive the IYTPP when compared with control families. Further exploratory analysis indicated there were changes in negative parental behaviour for families allocated to the intervention group. The current study reports on the longer term changes for a sample of 42 trial completers from the original sample of 60 families allocated to receive intervention. Short-term data had indicated a trend for improvement in parental attributes for families who had been offered the intervention and analysis of change in scores over a 12-month period confirmed this. Families in receipt of the IYTPP had significant improvements on measures of parental depression, well-being, stress, competence and in the quality of home environment as well as child developmental quotient, suggesting that over time, further positive benefits were seen in addition to the short term-improvements of improved parental mental well-being when intervention families were compared with controls.

Analysis of indices of change explored differential effects for high- compared to low-risk families on a range of factors. This indicated that, in most cases, the proportion of families exposed to greater risk at baseline who were achieving at least medium sized effects on a range of outcome was comparable to, and often greater

than that achieved by families exposed to lower levels of baseline risk, although differences did not reach statistical significance on the majority of comparisons.

These findings lend some support to previous research (Gardner, Hutchings, Bywater & Whitaker, 2010; Reid et al., 2004; Scott, 2005) that found families who had attended the Incredible Years BASIC parenting programme who had greater level of difficulties achieved comparable or greater levels of improvement post-intervention than families with lower levels of difficulties.

Griffith et al. (chapter 5) suggested that a mechanism for targeting resources to high-risk, disadvantaged families would be preferable to allocating resources by locality alone, as was the case with the Flying Start initiative, and the results of the present analysis go some way to support this. Griffith et al. (Chapter 5) suggested that measures of parental depression, poverty, childhood developmental delay and stress should be used to target parents of children with the greatest risk of poor outcomes in order that resources are effectively and cost effectively allocated. The current study strengthens this argument by demonstrating that families with the greatest need for intervention (based on income, parental and child developmental risk-factors) experience benefits that were comparable to, and in many cases greater than, those experienced by families with a lesser need of intervention.

Griffith et al. (chapter 5) found strong associations between child developmental delay, poverty and parent stress within the sample at baseline; all of which are key risk-factors for later child behaviour problems. In the absence of clear identifying child behavioural risk factors for later behaviour problems, such as aggression and non-compliance, child developmental status, as measured by a sensitive screening tool within community settings can be used to effectively identify children who are particularly vulnerable to develop later child behaviour problems.

and are likely to benefit the most from intervention. It is also worth noting that, in the absence of clinical levels of behavioural problems, immediate improvements in child outcomes as demonstrated by others (Hutchings et al., 2007; Webster-Stratton et al., 1998) are unlikely to be seen since specific behavioural difficulties are not yet in evidence in a sample within the age range of the present study. Changes in child developmental status that involve the development of complex skills are likely to take time. Furthermore large effect size differences are needed for changes to achieve statistical significance with such a small sample, and the current study was underpowered for this analysis.

As with any longer-term follow-up of parenting interventions lacking control comparison data, improvements must be interpreted with caution. Hutchings et al. (Chapter 6) reported only modest short-term benefits for intervention relative to control families following attendance on the IYTPP. This was due to the large variability in need for intervention and improvements for the whole sample on some measures suggesting that the Flying Start initiative was having community wide benefits. A trend for greater improvement in intervention families on all measures at six-months was maintained at 12-months and became significant on all measures. Lack of 12-month follow-up data for control families is a limitation of the study. As a result it was not possible to draw comparisons at 12-month follow-up between intervention and control groups at this point.

The decision to include only the trial completers resulted in reduced participant numbers, although 70% follow-up data is respectable, and this was necessary in order to explore outcomes for families experiencing differential risk factors. Significant differences between the original sample of 60 intervention families and the final 42 trial completers emerged for parent age and proportion of

parents reporting clinically significant depression at baseline, with no further differences on key demographics between families who had remained in the trial and those who were lost to follow-up.

Further analysis of the data should include intention to treat analysis for intervention effects with the last score of the 18 participants lost to follow-up carried forward on all measures, although this would not be appropriate for the analysis of effects of levels of risk on outcomes which was based on the sample of completers.

It is also worth noting that sample sizes were very small for conducting chi-square analyses to explore differences in the proportion of families with high and low levels of risk at baseline, making it unlikely that significant differences would be found despite the differences in the proportions achieving medium effect size changes.

In conclusion, long-term data indicates continued and significant improvements for families that received the IYTPP, with a greater proportion of families who were experiencing high levels of risk achieving medium to large effect size changes at 12 months post-baseline. The lack of data for control families requires that the findings be regarded with caution, however, long-term data demonstrating comparable and often larger proportions of high-risk than low-risk families experiencing at least medium effects on a range of measures lends support to the need to use additional targeting measures to distribute services in order that they target the families of children at greatest risk of poor long-term outcomes.

CHAPTER

GENERAL DISCUSSION

The discussion begins with an overview of the main objectives of the thesis. The findings are then discussed in relation to the current literature and policy implications followed by a discussion of study strengths and limitations and future possible research directions.

Overview and main objectives of the study

The main objective of the current study was to evaluate the effectiveness of the Incredible Years Toddler Parenting Programme (IYTPP) through a randomised controlled trial (RCT). The intervention was delivered to parents of one- and two-year-old children living in Flying Start (FS) areas identified by the Welsh Government (WG) as having high levels of economic disadvantage and was part of a community wide initiative in these areas.

The Flying Start population was identified in 2007 by the Welsh Government for the provision of additional funding of services for families with young children. Flying Start areas were selected based on level of disadvantage determined by ranking on indices of deprivation (Welsh Index of Multiple Deprivation, 2005) and level of free-school meals provided to pupils in the school catchment area. The Flying Start initiative funded the universal provision of four core services, parenting classes, additional health visitor support, parent and child language and play sessions and free childcare, with an allocation of £2000 per annum for every child aged 0 – 3 years living within the Flying Start area. The IYTPP was identified by the Welsh Government as a suitable intervention for delivery as part of this project and the Welsh Government had separately funded leader training in the IYTPP for staff from all authorities across Wales.

The Welsh Government provided Bangor University with £114,000 to independently evaluate the delivery of IYTPP in Flying Start community settings, alongside the other three components of Flying Start. This funding, along with three years of PhD funding by the Coleg Cymraeg Cenedlaethol for the thesis author provided the opportunity to conduct three studies. The first study explored the baseline characteristics of the small sample that were recruited for the RCT trial in terms of level of risk and need of intervention. Risk factors for poor child outcomes were identified and comparisons drawn with a previously recruited sample of disadvantaged families that took part in an RCT of a parenting intervention within Sure Start (SS) services (Hutchings et al., 2007). The second study evaluated the short-term effectiveness of the IYTPP using a rigorous RCT design, comparing families allocated to receive the IYTPP intervention with control families. The third study explored the longer-term effects of intervention for families who had provided data across a twelve month period, and explored whether the intervention had differential effects for the families who were experiencing elevated levels of the risk-factors identified in study one. Findings from the three main studies are outlined below.

Study 1: Targeting communities to tackle the negative impacts of child poverty: What have we learned?

Exploration of baseline characteristics of the sample of 89 families established the levels of risk-factors commonly associated with poor child outcomes within the sample. These included families with an income below the recognised poverty indicator for Wales (Welsh Government, 2011), families experiencing multiple

environmental risks, children with early signs of developmental delay and parents with clinically significant levels of depression and stress.

On the whole, families were found to be disadvantaged, however, levels of disadvantaging circumstances were not as high as might have been expected in a sample drawn from the areas predicted by the Welsh Government as the most disadvantaged in Wales (Welsh Government, 2009). When comparisons were drawn between the sample recruited for this study and a previously recruited identified high-risk sample, from similarly disadvantaged SS areas significant differences emerged. The SS sample had been identified based on levels of child behavior problems among three and four-year-olds being within the clinical range. This identifier of risk would not be appropriate for one and two year old children and the Flying Start sample, identified only by area of residence, had significantly lower levels of income poverty, multiple environmental risks and clinical levels of maternal depression and stress. These results suggested that the use of an additional targeting measure, such as early signs of child developmental delay, maternal mental health and poverty indicators would have resulted in the recruitment of a sample with children at greater risk of poor longer term outcomes and potentially been more effective in achieving the Welsh Government goals.

***Study 2:* Evaluating the Incredible Years Toddler Parenting Programme with parents of toddlers in disadvantaged (Flying Start) areas of Wales.**

The second study, that conducted analysis of covariance (ANCOVA) to establish whether there were any differences in outcomes between families allocated to receive the IYTPP intervention and control families, yielded modest differences. Intervention families saw significant improvement on a measure of maternal well-

being, with non-significant differences in the short-term on measures of child development, parent reported depression, stress, and competence, and quality of the home environment. Non-significant differences were seen using ANCOVA for observed, positive and negative parenting, language promotion and child deviance. Further analysis of observational data using paired t-tests demonstrated significant reductions in observed negative parenting for intervention families, with no change for control families. There were no changes in observed child deviance, language promotion or positive parenting, although the ratio of positive to negative parenting behaviours increased by 7% for intervention parents, compared to a 1% increase for control parents.

The study concluded that there were limited improvements for families that received the parenting intervention when compared with controls. Large variability in scores, coupled with improvements on several outcome measures for control families contributed to these findings, with data indicating that there were community wide benefits of the Flying Start initiative. Lack of data detailing uptake of the other three elements of the Flying Start was a weakness in this study.

Study 3: **Outcomes from a geographically targeted randomised controlled trial of a parenting intervention for parents of toddlers aged 1 – 2 years: Longer-term outcomes and secondary analysis of outcomes for families differentiated by severity of risk-factors.**

Paired t-tests undertaken using baseline and 12-month follow-up scores were conducted to establish whether changes in maternal well-being had been maintained, and whether any further significant changes had emerged for the intervention families. Long-term analysis was conducted using only families allocated to receive

the IYTPP, who had provided complete data up to the twelve-month follow-up (70% of the initial intervention sample). Significant improvements were seen for child development, parent reported well-being and competence along with quality of the home environment. In addition, there were significant reductions in parental depression and stress. Further analysis to explore any differential effects of level of family risk in terms of poverty status, multiple environmental risks, child developmental delay, and clinically significant levels of parent depression and stress, saw comparable and in most cases a greater proportion of families experiencing the highest levels of risk achieving medium effect size changes at 12 months post-baseline. Due to small sample sizes, these differences were only statistically significant in a few cases.

The study concluded that attendance on the IYTPP was associated with long-term improvement, with the families with greatest need making comparable and greater improvements than families with a lesser need. Findings should be interpreted with caution due to a lack of control data and a small sample size.

Relevance of research findings to previous literature

The exploration of the baseline data, as reported in chapter 5, found families recruited from Flying Start areas were experiencing a range of risk-factors associated with poor child outcomes. The Flying Start initiative targeted small geographical areas with the highest levels of economic and social disadvantage in Wales (Welsh Government, 2011). While some families were experiencing elevated levels of risk when compared to national averages (Office of National Statistics, 2009; Welsh Government, 2011b), levels of risk factors for possible longer term child behavioural problems, such as child developmental delay, and parental depression and stress were

not as high as might have been anticipated if targeting for risk of poor outcomes (Keirnan & Mensah, 2009).

Policies such as Sure Start and Flying Start aim to reduce poor long-term outcomes by targeting the communities within which larger numbers of children are at such risk. However, as was clear in the study reported here, a sample with varying levels of risk was recruited. It is worth noting that families recruited to participate in the RCT may not be representative of the population of Flying Start catchment areas in general. Families who are willing and able to access services and consent to participate in providing data for research projects, such as this one, may have greater levels of personal resources, making them potentially a different population as was demonstrated in the National Evaluation of SS in England (Belsky & Melhuish, 2007).

The variability of risk-factors in this sample, recruited due to their eligibility to receive universally available services in their community, contrasts with the work of others who have delivered similar but targeted interventions. The IY Basic Parenting Programme (the original programme of the developer of IYTPP: Webster-Stratton, 1989) has been evaluated in the context of both Sure Start in Wales (Hutchings et al., 2007) and Head Start in the US (Webster-Stratton, 1998) where both studies reported high levels of need for intervention particularly in terms of parental depression and stress, family income and multiple environmental risks. In both these trials, targeting of individual risk and need was undertaken. Hutchings et al. (2007) delivered the IY intervention within the Sure Start setting, but targeted the parents of children with significant behavioural problems, while Webster-Stratton (1998) delivered the intervention to families who were in receipt of Head Start, which is also targeted on individual need rather than locality (Zeigler & Valentine, 1979). In

both cases, specifically targeting on a measure of individual need resulted in the recruitment of a higher-risk sample than seen in the Flying Start current study.

The current study found strong associations between child development, parental stress and family income (chapter 5) all of which pose risks for later child behavioural problems. Screening for these factors to aid the identification of those in greatest need of a preventative intervention to boost parenting skills. themselves a known protective factor in relation to later child behavioural problems (Keirnan & Mensah, 2009; 2011) would be beneficial and more cost-effective.

The decision to target only by child age and locality had an impact upon study findings in terms of intervention effect. Some families, because of their lack of baseline need, were experiencing ceiling and floor effects on some measures, for example 50% of parents had minimal levels of depression at baseline using the BDI-II, and over 50% of parents were scoring in the upper quartile for parent competence using PSOC. For these families, there was little room for positive improvement on these measures consequently, despite trends for short-term improvements, significant changes when compared with control families would be hard to achieve with families of this type. When Scott, O'Connor & Futh (2006) evaluated the IY Basic Programme (plus a six-week reading intervention) half their sample were identified as families of high-risk children and the other half were families that accessed the universal service without having children with significant behavioural problems. They too found that on average, families were not as high-risk as anticipated and that consequently, treatment effects were not strong.

In the current study, the programme was delivered to families of very young children as a preventive intervention for later developmental and behavioural difficulties and before direct evidence of behavioural problems of aggression and non-

compliance are evident. The intervention was effective in improving two of the key risks for later child developmental and behavioural difficulties. Parental mental-wellbeing improved for the intervention sample and negative parenting was reduced. Improvements in parental mental-wellbeing and reductions in negative parenting, both improvements in risk factors for poor child outcomes, should predict future positive child outcomes. Outcome data is indicative of this, however the lack of longer-term control and observational data needs to be recognised as a limitation in terms of these conclusions. Previous research reporting longer-term follow-up of families in receipt of the IY parenting programmes for older children with clinically significant levels of behavioural problems (Bywater et al. 2009; Drugli, Larsson, Fossum & Mørch, 2009; Reid, Webster-Stratton & Hammond, 2003; Scott, 2005; Webster-Stratton, Rinaldi & Reid, 2010) has seen sustained levels of improvement. Given that the current intervention was for younger children, it was likely that changes in child development for children with significant levels of delay would take time emerge. This was anticipated by the Welsh Government in terms of their expectations about the way in which the Flying Start initiative would impact progressively on child outcomes over time (Welsh Government, 2011b) and study findings support this.

Long-term outcomes of intervention effectiveness are encouraging, but should be interpreted with caution. The proportion of families with the greatest need of intervention were showing comparable and often greater improvements than families with a lower level of need for intervention on a range of measures (chapter 7). This supports the findings of others who have demonstrated comparable and differential intervention effects for high-risk families (Gardner et al., 2010; Reid, Webster-

Stratton & Baydar, 2004; Scott, 2005) see *study policy implications* for a further discussion on this point.

In conclusion, the sample recruited for this project was not universally at high-risk of poor outcomes. The recruitment of families on the basis that they lived in a disadvantaged area resulted in a sample that had variable levels of risk-factors associated with poor child outcomes and a need for early intervention in the form of parent training courses. The results highlight the need for additional targeting to ensure that resources are delivered to those with the greatest need. Large variability in scores coupled with some improvements in control families resulted in modest short-term benefits for families allocated to receive the IYTPP in the form of improved parental well-being, with further analysis indicating reductions in negative parenting for intervention families when groups were analysed separately. Further analysis indicated that families saw additional significant improvements over the longer-term and that high-risk families were seeing comparable, and in most cases greater improvements than lower risk families, supports the need to target more effectively.

Study policy implications

There are several implications for policy. Firstly, there appear to be benefits for children and parents of the wider Flying Start initiative. The current trial commenced just after the inception of Flying Start in deprived communities in Wales, and over the initial six-month period the whole sample experienced significant benefits on a range of outcome measures. Funding of the initiative has been extended to 2014, and consequently early indication of programme success is good news.

Secondly, the trial has demonstrated that preventive parenting programmes can be effectively delivered within disadvantaged communities in Wales. The IYTPP was delivered alongside the other core components of the Flying Start initiative, with

clear improvements emerging in the shorter and longer-term, particularly for those families with the greatest of need.

The third implication for policy is that targeting funding by area to provide services to families of young children by locality may not be the most effective way to reduce risk of poor child outcomes. The Flying Start initiative aimed to identify very small geographical areas with high levels of disadvantaging circumstances and risk-factors for later child behaviour problems. Research findings suggest that in doing this they captured considerable numbers of high-risk families but that a significant proportion of families that are functioning well also live in these deprived neighbourhoods and may be over represented in service take-up. The first wave of the Welsh Government evaluation of Flying Start (Welsh Government, 2011b) published in December 2011 confirms these study findings.

Data from Welsh Government Flying Start evaluation on service uptake by families with the highest-levels of socio-economic disadvantage are mixed. In general service uptake was satisfactory, however there is evidence that the more 'advantaged' families are utilising more services, particularly the language and play element (Welsh Government, 2011b). This is similar to findings from the National Evaluation of Sure Start (NESS; Belsky & Melhuish, 2007) in England. Additional targeting to identify the families at greatest risk is necessary to avoid a disproportionate uptake of services by families with lesser needs.

A recent report by Frank Field (2010) recommends that children's centres in deprived areas should offer some services on a universal basis but that additional targeting measures should be used to effectively distribute scarce resources to families most in need of intervention. Data from the present study lends support to this suggestion and also highlights tools that could effectively be used for this purpose.

Field (2010) suggests that greater responsibility should be put upon professionals working in the children's service settings to ensure that families most in need of intervention are the ones in receipt of them, and that reliable screening and identification methods are employed to facilitate this. Changes in policy are necessary in terms of the processes by which funding is allocated for support to individual families. Distributing services by selecting areas with high levels of economic deprivation and offering universal services to all who live there is an ineffective way of ensuring that the families at greatest risk receive the services they require and can often result in take-up of services by people who do not require them. It is also important to acknowledge that around half of disadvantaged families do not actually live in predominantly disadvantaged areas (Melhuish & Hall, 2007). Funnelling services for children and families into disadvantaged area, excludes fifty per cent of the families with the greatest need, again adding weight to the argument that targeting by locality is not as effective as targeting by individual need.

In conclusion, there is promising evidence of the effectiveness of the Flying Start initiative and of the IYTPP component. To ensure that the families most in need of additional services are the ones that are in receipt of them, changes in policy must be made to utilise additional targeting measures.

Study strengths

This trial has several strengths, both in terms of measurement and intervention delivery. Data was collected via a rigorous RCT design and with researchers blind to condition over the first two data collection points. The data was collected by a small team of researchers in eight centres across North Mid and South Wales with a limited budget. Multiple modes of data collection were used, including parent report, direct

assessment of child developmental status and direct observation. All measures were standardised with researchers having received the necessary training to administer them. The availability of 12-month follow-up data for intervention families is a study strength, despite the absence of control data at this point, with the average follow-up period for this type of intervention previously reported as a median of five months (Kazdin, 1993).

A further study strength was the effective delivery of the IYTPP *within* the Flying Start community setting, by group leaders trained in and with experience of delivery of the programme. Although programme fidelity was not directly measured, weekly supervision sessions with an IY mentor were offered to all group leaders, with attention paid to both programme content and group process. Attendance among parents was high with low attrition rates, particularly for a preventative intervention that typically see lower retention rates due to the lack of severity of problem (Scott et al., 2006). This suggested that group leaders had effectively engaged parents and removed many of the barriers to attendance resulting in the high levels of parent reported satisfaction (see appendix L). A particular success of the IYTPP RCT, in Flying Start community settings, was the co-ordination of IYTPP sessions and Flying Start crèche provision. In several centres, groups were set-up to run whilst children were in receipt of their free childcare provision, essentially doubling up on resources.

Study limitations

A major limitation of the research project was the selection of the Schedule of Growing Skills (SGS II) as the main outcome measure. As a screening tool, the SGS II was lacking in sensitivity and the use of a more detailed developmental assessment tool would have been advantageous. The Schedule of Growing Skills II was also an

inappropriate choice of measure due to the fact that the initial goal of the intervention was to change parenting behavior. The intervention was a parenting intervention, and as such the use of a parenting measure would have been more appropriate in the first instance. It would be unlikely to see large effects on child developmental quotient over a six-month period as a result of a universal intervention with families with a range of needs.

The lack of data on the uptake of the additional Flying Start components is a limitation of the research. The study failed to monitor the frequency with which families were receiving additional health visitor visits, utilising their free-crèche places, other than when they were attending the group, and whether they were attending the parent and child language and play sessions. Collection of these data would have contributed to a greater understanding of intervention effects, in particular the improvements made by control families over a six-month period. It must however be noted that the aim of the research was to evaluate the parenting components of Flying Start, within the context of the community wide Flying Start initiative, which was achieved.

A further study limitation was the sample size, which given that the projects was evaluating a universal intervention, may have been insufficient given the variability of risk for the recruited population. No official power calculations were conducted, as this was the first evaluation of the intervention. In retrospect, and in light of the variable level of risk in the current sample, recruitment of a larger sample would have been advantageous. As Flying Start areas were identified as being highly disadvantaged, it was anticipated that families recruited would have similar levels of baseline risk. A larger sample would be required to realise large effects with a preventative intervention programme that included a significant proportion of relative

low-risk participants. A larger sample size would also be required for the analysis of differential intervention effects for high and low risk families, such small group sizes were not appropriate for the chi-square analysis.

A further limitation of the study is the lack of adequate 12-month follow-up data for the observational measure. Consequently, it was not possible for short-term reductions in negative parenting and child deviance to be tracked longer-term.

Future directions

This was the first RCT trial of the IYTPP conducted with parents of one- and two-year-old children. Based on the findings of this study, future work should involve targeting the intervention on families identified as high-risk using one or several of the recommended targeting measures. This would enable the exploration of intervention effects in families with the highest need for intervention, enabling a comparison of intervention effect sizes with the current sample, with the addition of control data.

Future studies should collect sufficient data on the utilisation of services by families and with a larger sample it would be possible to conduct mediator and moderator analyses to establish the effects of risk-factors such as income poverty, parental depression/stress and child developmental delay on intervention outcome and the identification of active ingredients in the programme.

A core component of the IYTPP is to increase parental awareness of child developmental milestones and the role of parenting practices in promoting child development (Webster-Stratton, 2008). Future research should include monitoring parental understanding of child development and any relationships between parental perceptions of child development and developmental outcomes. In addition, given

known inaccuracies in parental perceptions of child achievement among high-risk parents, the utilisation of a parent reported measure of child developmental attainment alongside a direct assessment of child development could assess whether attendance on the IYTPP has been successful in educating parents of their child's capabilities.

Final conclusions

The trial saw the effective delivery of an intervention for parents of young children who were potentially at risk of long-term behavioural difficulties delivered as part of a universal service for children and families living within high risk Flying Start communities. Short-term findings indicated modest improvements for children and parents with significant improvements emerging longer-term. Findings support the work of others, demonstrating sustained improvements, with families experiencing elevated levels of risk seeing comparable and in most cases greater improvements and argue for the targeting of interventions of families whose children are at greatest risk of poor outcomes.

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APPENDIX A

(1) RECRUITMENT

Flying Start Health Visitors (parent group leaders) to use client based knowledge to select eligible families (i.e. families of children aged 1-3 yrs, living in Flying Start areas), who might like to attend the IY 'Toddler' parenting course, and participate in the research study. Families must meet the following inclusion criteria:

- Child no younger than 12 months and no older than 36 months AT BASELINE
- Living in designated Flying Start areas across Wales
- Parent must be able to attend the locally run parenting sessions

The parenting course and the research study are briefly introduced to families by Flying Start staff (usually Health Visitors). The names and contact details of families interested in taking part are then forwarded to the IY Wales research team (subject to verbal consent). The file should include:

- Parent name and surname
- Address (including post code)
- Telephone number
- Mobile number
- Child's name
- Child's date of birth
- Anything that researchers should be aware of to ensure their own safety
  Whether group leader suggest 2 researchers to visit
- Whether parent has attended IY in the past and when

Whether the Schedule of Growing Skills has been administered to the child in the last 3 month

This template is sent to Health Visitors in Excel format before recruitment begins.

(2) BASELINE APPOINTMENT

(i) Participant Database

As soon as a list of names is forwarded by a particular group/area, their details are entered onto the main participant database. At this stage, all families are assigned a trial identification number (irrespective of whether they may later decline to take part or withdraw from the study). This ID number should be entered at the top of all correspondence and measures. Their trial ID numbers, names and contact details, including index child name and date of birth, are entered into the Participant Database. In accordance with the Data Protection Act, the participant contact database is encrypted with a password, that is only accessible to the research team.

(ii) Timetabling

We aim to recruit between 12 and 18 families per Flying Start area. For each participating centre / area, we strive to schedule all baseline visits into a one-week window, and even less (3 or 4 days) for areas that necessitate overnight stays (based on two researchers conducting fieldwork). In order to avoid potential bias, the interview and observation visit should not be conducted by the same researcher, although this is not always possible during intense data collection periods. Once the appointment has been made, either by telephone or by letter (see sections (iii) and (iv), below), participant details are entered on the timetable (for sample timetable see Appendix A). The trial ID number, parent name and address (including postcode), telephone number(s), as well as the child's name and DOB should be entered into the appropriate block on the timetable (this can be done from the main database via Mail Merge).

Wherever possible, all visits should be scheduled during daylight hours. In cases where this is not possible, and an area is classed as 'high risk', then this is a good opportunity to schedule 'reliability observations', so that researchers only work in pairs during evening visits.

(iii)Appointment by Telephone

Parents are contacted by telephone to establish whether or not they are still keen to take part. If willing, baseline appointment is made.

Basics of call:

- Who forwarded their names and why
- If they want to take part in the research, to explain that 2 home visits need to be arranged with them
    - one for questionnaires and developmental assessment with the child (if not already done by HV) which will take between 1 and 1 ½ hours to complete
    - one for observation which takes 40 minutes to complete
- Arrange a convenient time for first baseline visit (anytime between 9am-5pm).
- Explain that both themselves and the index child will have to be at home for both visits
- For the interview visit, suggest a 'quiet' time of day, when older siblings are more likely to be at school, so that disturbance is kept to a minimum
- Plan visits around child's typical daily routine (i.e. when the child is most likely to be awake and alert)
- Ask about preferred language for interview and observation
- Say who will come for both visits
- Ask for child's name / DOB if missing from the list forwarded by group leaders
- Get directions to house (if necessary)
- Explain that a letter of confirmation will be sent in the post with the dates and times of visits, as well as our contact details

Spiel

Hello, this is X from the Incredible Years Centre at Bangor University. I have been given your name by X who said that you might be interested in attending the IY

Toddler programme and take part in the research we're conducting here. We are in your area X (e.g. next week), *and we would like to arrange two visits to come and see you in your home. During the first visit we will give you some questionnaires to fill in and do a developmental assessment with X. The visit should take about an hour in total. On the second visit we would like to observe you and X for half an hour.*

Go through the available time slots in the time-table to schedule both appointments, and then tell them who will be coming to see them.

So, X will be coming to see you on X to do the interview and developmental assessment with X, and X will be coming to do the observation on X. We will send out a confirmation letter in the post with the dates and times for you, and it will have our contact number so that you can get in touch if anything crops up and you are unable to keep the appointment.

Thanks and goodbye

Letter of confirmation sent in the post the same day (see appendix B)

(iv) Appointment by Letter

Ideally, all appointments should be made by telephone. Having spoken directly to the parent makes it more likely that they keep the appointment and also helps build rapport. However, this is not always possible (e.g. the phone numbers forwarded to us may no longer be in operation, or they simply may not have a telephone contact number). In such cases, appointments must be made by letter (see appendix C). The letter covers the same basics as the phone call. Appointments by letter are also made in cases where families cannot be reached by telephone after numerous attempts. We usually persist in re calling them until all other appointments for that particular group are complete, after which a letter is sent out to them with dates and times of appointment.

In accordance with the University's lone worker policy (see Appendix D), it is important that the researcher knows that the appointment was by letter. Therefore 'BY LETTER' is always added at the bottom of their slot in the timetable.

(v) Preparing Packs for Baseline Visit

When the timetable for particular centre has been completed, packs are prepared for the two baseline visits.

Interview Pack

The baseline interview packs (blue document wallets) comprise all documents required to complete the visit. The trial ID number, and the centre ID number, as well as venue and date of parenting group is written on the front label of the folder. The name, address, and scheduled time of visit entered on the front cover sheet inside the pack. It can also be useful to note on the front cover sheet any information that we need to ask families (e.g. missing post-code etc), or any other issues relevant to the researcher (e.g. lone worker issues / child special needs). All paperwork required for the visit will already be inside the folders, with the exception of the Ages and Stages Questionnaire. The correct version of the ASQ (corresponding to index child age) is added to the pack at this stage.

Observation Packs

The observation packs include a front cover sheet, the 6 5-minute observation recording forms, the HOME Inventory, and the Cover Impressions Inventory, paper clipped together. The trial ID, contact details, and any additional information are filled in on the front cover sheet.

Maps

Street maps are then either photocopied or printed, with the participant address clearly highlighted. Two maps are required for each participant (one is placed in the interview folder and the other clipped onto the front observation cover sheet).

(3) BASELINE VISIT 1 – INTERVIEW

For your own safety, ALWAYS follow the lone worker policy when conducting home visits

(i) Materials required

- Baseline Measures Folder, which includes the following documents:
  - Information sheet
  - Consent Form
  - Additional contact details form
  - Change of address form and freepost envelope
  - Personal Data and Health Questionnaire
  - Beck Depression Inventory
  - Parenting Stress Index (short form)
  - Warwick-Edinburgh Maternal Well-being Scale
  - Parenting sense of competence
  - Schedule of Growing Skills Record Form and Profile Form
  - Guidelines for observation visit
- Schedule of Growing Skills Pack
  - Always check that the pack is complete
    - Check for, and replace, missing items (e.g. pegs, blocks, doll, etc)
    - Ensure there is enough plain paper and crayons inside the pack
    - A few spare record forms (for emergencies!)
- Ages and Stages Questionnaire (relevant version for child's age [12-60 months]).
- Additional items
  - A few spare baseline packs (which may come in handy in cases where materials might be missing from your pack)
  - 2 complete sets of the Ages and Stages questionnaires (in cases where child age is not known before visit takes place)

(ii) Overview of Visit

- Researcher to provide information on study, and answer questions.
- If willing to take part, parent to sign consent form (available in Welsh or English).
- Other administration (e.g. additional contact details (e.g. get postcode), change address form, and back up address).
- Once consent forms signed, begin with the PDHQ interview.
- Give the five questionnaires to the parent and ask them to complete. Or read out each questionnaire for parents who have difficulty reading English.
- Whilst parent completes questionnaire, researcher to complete the developmental assessment (Schedule of Growing Skills) with the index child (if needed).
- Give parent home observation guidelines and explain briefly what will happen during the observation
- Thank you and goodbye.

(iii) Starting the visit (hellos and chat)

- Introduce self, build rapport with parent, and put parent at ease.

(iv) Information, Consent, and general admin

I'll start by telling you bit about the study. We are a research team based at Bangor University, and we are looking into the usefulness of this new Incredible Years Toddler programme for parents. We hope that, if we find that it is useful, it will be made available to more parents as part of routine services. The parenting programme is run for groups of up to 12 parents, and will be held locally and run by X and X. The group runs for 12 weekly sessions, and each session lasts between 2 – 2 ½ hours. One group will be starting shortly (in a couple of weeks or so), and another one will run in about six months time. There are limited spaces in these groups, so to be fair to everyone, who attends which group is decided by chance, and we have no say at all in deciding who attends which group. We as researchers are NOT involved at all with these parenting groups, our role in the study is to visit families to collect

information. Today I will be asking a few questions, and giving you some questionnaires to fill in, and to do a developmental assessment with X. Some of the questions are quite personal, and if you find them intrusive, you don't have to answer them. It's just that we have to ask the same questions of every parent we see. All information you give us is confidential. You are free to withdraw from the research at any stage. Your withdrawal from the research will not affect current or future access to parenting group, or any other Flying Start services.

As a thank you for helping us with the research, we will give you £25 after we have completed the two visits with you. This will be paid around the time that the first parent group starts. So, if you're allocated to the first group, you will be paid at the end of the first session, and if you're in the later group, then X or X will bring you the money on the week that the first group starts. We would like to see you again in about six months time, if that's OK, to do the same two visits. You will receive £ 25 as a thank you for your time again at this point.

Do you have any questions about the research so far?

Give copy of information sheet.

The research study is described in detail in this information sheet. This is yours to keep, and if you have any questions at all about the research please contact the research team on the number shown, and we will be more than happy to answer any questions that you may have.

Complete consent forms.

As a member of the University, whenever I carry out research I have to make sure that the people taking part in the study are happy to do so and that they fully understand what it is all about. To show that we have done this please could you sign this consent form, thank you?

Make sure that they complete both sides of the form.

Other admin

Give change of address form and freepost envelope.

Can I leave this form with you, so that you can let us know if you change address before our next visit. There is a freepost envelope for you, and in return we will give you five pounds as a thank you for letting us know.

Fill in additional contact details and ask for a backup address (e.g address and telephone number of close family member).

(v) Interview: Personal Data and Health Questionnaire

I'll start by asking you a few background questions. As I said before, if you feel uncomfortable with any of the questions I ask, you don't have to answer them.

Administer this semi-structured demographic interview first. It takes about 10 minutes to complete. There is no need to ask questions 3f, 3g, and 3i , as they are not relevant to the current research study.

(vi) Parent Questionnaires

After completing the PDHQ, hand them the five questionnaires.

I'm now going to ask you to fill in some questionnaires. While you're filling them out, I'd like to do a developmental assessment with X (If SOGS needs doing). *Let me know if you have any questions about the questionnaires, or if anything isn't clear.*

Make sure they understand that the first four questionnaires are about themselves, and the last one is about their child.

(vii) Developmental Assessment: Schedule of Growing Skills (SOGS)

Whilst the parent is filling out the questionnaires, start assessing the child with the 'assessed' items on the SOGS. Ideally, the test should be administered on a table, with the child sitting opposite, but if this is not possible, then use a coffee table, or sit on the floor. It is important that you are roughly on the same eye-level as the child.

On each subscale, start at a level that is generally consistent with the child's age, and then move up or down the skills subscale depending on child's performance. Make sure that you test all the cognitive items (all item numbers that are circled).

Complete remaining items on the SOGS (parent reported) as soon as they finish the questionnaires). Ideally, the test should be administered on a table, but if this is not possible, then use the floor / coffee table etc.

It is also worthy of noting that there is considerable variation in children's willingness to perform on the SOGS, which is not surprising given their young age. For example, one child may be outgoing and confident, and therefore more than happy to be assessed, whereas another child may be shy, irritable, or tired, and reluctant to get involved. If you think that a child's performance did not reflect their true developmental capabilities due to such factors, then please make a note of this at the front of the record form. In rare cases where the child flatly refuses to be assessed, it may be necessary to book another half hour appointment to re-administer at a time of day when the child is most likely to be responsive.

(viii) Finishing the Visit

Once the SOGS is completed and the questionnaires filled in, thank the family for their time, give them the home observation guidelines, and briefly explain the observation process.

Thank you very much for your time, and for filling in those questionnaires … X is coming to see you on X to do the observation. Here are some guidelines about what

will happen during the observation (hand out the guidelines). *It's a half hour observation of you and X interacting as you normally would, she will also be videotaping this interaction. Some parents get out some toys and play for half an hour, but it's up to you what you do. For the half hour that she is observing, she wont be able to talk to you because its important that she stays focused on the observation so that she can record what is happening. I know it may feel a bit odd to have a stranger in your house watching you, and filming you, but please try to relax and be as natural as possible. She won't be judging how you and X interact, we are just interested in different ways that toddlers interact with their parents. The video is not going to be shared with anyone outside the research team, the tapes will be kept safe, and we will be looking at them to study the type of language parents use with toddlers.*

X will tell you when she is beginning the observation and then tell you when the half hour is over. She will then ask you a couple of questions before she goes. The whole visit should take about 40 minutes.

Thanks again for your time, and we will see you again in 6 months time.

(4) BASELINE VISIT 2 – OBSERVATION

For your own safety, ALWAYS follow the lone worker policy when conducting home visits (Appendix D)

(i) Materials required

- Baseline observation pack comprising:
    - Front cover sheet (with contact details and dates)
    - Six observation sheets (1 sheet per 5 minutes)
    - HOME Inventory
    - Coder Impressions Inventory
- Video camera (make sure there are enough minutes remaining on the camera to record observations)
- Tripod
- Timer
- Extension lead
- Power cable
- Clip board

(ii) Overview of visit

- Starting the visit (putting parent at ease)
- Beginning the observation
- Reliability observations
- Finishing the observation
- Completing the HOME inventory
- Ending the visit
- Completing the Coder impressions Inventory

(iii) Starting the visit (putting parent at ease)

- Hellos and chat
- Ensure they understand what will happen during the observation
- Encourage to ask questions before you begin

- Reiterate that you will not be able to talk during the half hour you are observing
- Encourage them to relax, and pretend you (and the camera) are not there!

Hello, I'm X from Bangor University. (say hello and chat a bit with index child too). *Are you clear with what's going to happen during the observation? I know X explained a little about it when she visited you on X. It's a half hour observation of you and X interacting with each other. It's entirely up to you what you do. Most parents get some toys out and play for the half hour, but I know that half an hour is a long time for them to sit and play when they're this age.*

I won't be able to talk at all whilst I'm doing the observation. I'm not being unsociable, it's just that I have to concentrate on recording the interaction! I know this must feel quite odd to have a total stranger and a camera in your living room, but please try to relax and act as natural as possible. Try and pretend I'm not here!! You'd actually be surprised at how many parents comment on how fast the half hour goes. Do you have any questions at all about the observation?

Remind them to switch the TV off for the observation. In cases where families refuse, then ask them politely to turn the volume off.

If child is old enough to understand, try to explain the 'no talking' rule to them, too.

X is going to have to do some quiet work now, and I won't be able to talk with you for a while, but I promise I'll tell you when I'm done, so you can show me some of your toys.

(iv) Beginning the observation

Make sure the parent is comfortable with the procedure. Set up the camera to capture where mum and child will be interacting / playing (e.g. on floor space / on sofa / sitting at kitchen table). Ask the parent whether you can plug the camera in their socket, and where the nearest one is. Try to keep the camera close to you, as

toddlers typically show very much interest in it! It is also useful to have the camera close, as you can make sure that the parent-child dyad are in shot, and move the position of the camera if possible. The camera also has a minute timer, so it is possible to use this as your timer (but always take a spare one as it`s not always possible to have the camera close by).

Once the camera is set up, and the parent and child are ready, begin the observation.

Is it OK for me to start the observation now? Have you got any questions before I start?

- Observe interaction for a total of 30 minutes.
  - Observations are completed in 5-minute segments (1 coding sheet represents 5 minutes of observation time).
  - When each 5-minute interval is completed, fill in valence details on the reverse of each coding sheet.
  - If any family member absents him or herself from the observation for an extended length of time (over one minute) - for instance to answer the phone: stop the clock and add the time to the top of the form. Also add a note on the coding sheet explaining the extra time added.

CODING TIPS

- Keep your pen moving as much as possible during the observations – this way, the family is not aware of what you are doing (if the parent sees you writing only when she speaks, then she may stop speaking).
- Try to observe children and siblings without giving eye contact (or they may begin 'performing' for the observer).
- Often, the index child might test the rule about you needing to do some 'quiet work'. If they talk to you, laugh in your face, etc., IGNORE THEM: Do not look at them, gasp, laugh, or in any way let them know that you're responding to them.

RELIABILITY OBSERVATIONS (20% of visits)

Because we need to ensure that the DPICS is being used correctly, the research team have weekly 'reliability' meetings over the course of the study. During these meetings, coders practice using the DPICS using videotaped segments of parent-child dyads from previously collected data. After half an hour of observing, coders add up their frequencies and check their percentage reliability with the primary coder. In addition to this, 20 per cent of all home observations have two observers coding the same interaction. This way we can be certain that the observations carried out during fieldwork are reliable and accurate.

- When a second coder is present, she will need the same paperwork.
- Both primary and secondary coders will sit / stand together to do the observations when possible.
- Decide who will be the timekeeper.
- At the end of a 5-minute interval, the timekeeper should signal to the other observer that the time segment is complete (e.g. by nodding).
- Each observer uses this time to fill out the valence data for parent and child, and then move on to another segment.
- In order that the observation causes minimal distraction to the family, it is important that observers keep communication to a minimum (non-verbal communication is preferable).

(v) Finishing the observation and completing the HOME Inventory

Turn video off at the end of the half hour section. If parent and child are still happily playing, use a couple of minutes to complete the 'observed' items on the HOME inventory.

Then tell parent that the half hour is over, and ask them how they felt about being observed. Give the child some attention for a few minutes.

Then complete the rest of the items on the HOME inventory, by asking the parent:

Before I go, I just need to ask a few more questions, if that's OK.

Complete the demographic information on the front page, and then complete the remaining items, overleaf.

(vi) Ending the visit

Pack away camera and other materials (REMEMBER THE POWER CABLE!). Thank the parent and child for their time, and say that the University will be in touch in a week or so to let them know whether they have been allocated to the first or second group. Also remind them at this stage that we will need to see them again in about six months time to repeat the visits.

Thanks very much for your time, and for taking part in the study. We will be in touch with you in a week or so to let you know whether you're in the first or second group. Thanks again for your time, and we'll see you again in six months time. If you have any questions in the meantime, please don't hesitate to contact us. Our contact details are on the information sheet that we left with you.

(vii) Completing the Coder Impressions Inventory

If there is time before your next scheduled visit, take a few minutes to complete the Coder Impression Inventory in the car. However, avoid doing this if you are in a high risk area. If this is the case then drive your car somewhere safer.

END OF BASELINE VISITS

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(5) ORGANISING GROUP ALLOCATION / PARTICIPANT PAYMENT / SCORING AND INPUTTING DATA

(i) Information for N-WORTH

When all baseline data has been collected for a particular group, details are sent (via e-mail) to Michelle Williams at N-Worth for randomisation into intervention and control groups (**michelle.williams@bangor.ac.uk** and copy to **r.whitaker@bangor.ac.uk, d.williams@bangor.ac.uk**). The file is set under the following headings:

- Trial ID
- Centre number
- Child age (either 1 or 2)
- Gender (m or f)
- Content (yes) ** names are NOT forwarded without consent, but NWorth require that this column is completed
- Child initials (e.g. NW; HJG etc)

(ii) Information for administrator liaising with group leaders

a. Contact database

As researchers must be blind as to participant condition, N-Worth forward the randomised names back to Dilys Williams at IY Wales, in the same format as above, with an additional column for intervention or control condition (**d.williams@bangor.ac.uk**). However, this information is not sufficient to enable Dilys to inform group leaders which families are intervention or control. Therefore, at the same time that names are sent for randomisation, an excel database is forwarded to Dilys, under the following headings (this information is cut and pasted from the main participant database):

- Trial ID
- Control/intervention (NB this is left blank for Dilys to complete)
- Centre name and number (e.g. Holyhead (5))
- Parent name

- Parent surname
- Child name
- Address 1
- Address 2
- Address 3
- Address 4
- Address 5
- Telephone
- Mobile

b. Group leader letters

At this point, group leader letters are also forwarded to Dilys, with all randomised families and their contact details (see Appendix E for example). We include all families under the 'intervention heading', so then Dilys can cut and paste the relevant families to the 'control heading' as necessary. On this letter, we also include a table listing families who: were not eligible; declined to take part; withdrew from study before group started, as well as the reasons why.

c. Attendance lists

A group attendance list is forwarded to Dilys, which includes ALL families for that particular centre / group (see Appendix F). As soon as N-Worth forward the randomised names to Dilys, families allocated to the control condition are removed from the table. This table is then given to group leaders to complete on a weekly basis (when they come for their weekly supervision), so that we can monitor the number of sessions attended by each participant in the intervention group.

d. Participant letters

A template letter which informs families whether they have been allocated to intervention or control group is forwarded to Dilys at this stage. The letter for the intervention group (Appendix G) includes the dates, times, and venue of the group, and that they will receive their £25 (as a thank you for completing the measures) at the end of the first parenting session. The control families letter (Appendix H) informs them that they will be attending a parenting group in their area in about 6

months time, and that they will receive their £25 around the same time as the first group starts.

(iii) Participant payment

In order to pay participants, School of Psychology 'Participant Payment Forms' must be filled out for EVERY participant whose name has been forwarded for randomisation (Appendix I). Participant payment (cash) is ordered and collected from School of Psychology finance department, usually from Everill McQuarrie (based in Brigantia). The cash for each participant is put in an envelope, together with a letter thanking them for taking part in the research (see Appendix J). The letter also reminds them that we will visit them again in 6 months time. The green participant payment form is stapled to the envelope. All envelopes are then given to group leaders who then distribute payments to intervention families at the end of the first session, and deliver payments to control families within that week if possible. The signed green slips are returned to the research office within one week.

Signed participant payment forms must then be returned to the finance office as soon as possible (any delay may cause problems in obtaining cash for the next group).

(iv) Update Database

When baseline visits have been completed, it is important at this stage to update the database to ensure that all information is correct. It is essential that the following information is entered:

- Any missing information (e.g. postcodes, DOB etc.)
- Notes from visit (e.g. if any lone worker issues arose during the visit / any concerns regarding child protection [any concerns of this nature should be discussed with the clinician in charge of the project] / child special needs / any information that would be useful for the fellow researchers)
- Whether SOGS was done by researcher or whether record and profile form needs to be chased up from health visitors
- Whether parent has attended IY group in the past or not, and how long ago
- Whether there is any missing data that needs to be chased up (e.g. if questionnaires have been left with participant)

- Dates of 1st contact, interview visit, and observation visit
- Whether the observation was videotaped
- Whether their names were sent for randomisation or whether they declined
- Comments (whether the family looked like they required intervention). This information is taken directly from the Coder Impressions Inventory (item 72), and is rated on a scale from 1 (yes – definitely) to 5 (no – not at all)

(v) Scoring and inputting

When baseline visits are complete, the observation packs should be placed inside the blue baseline wallets, so that all baseline data for a given family are kept together within the one folder. All participant folders should be kept in a locked filing cabinet when not in use.

All measures must be scored in accordance with the developer's manual (see section 1 (v) for information on administration and scoring). The individual scores from each measure should then be inputted into the existing SPSS file.

All measures should be double scored (e.g. scored up manually, and then checked against SPSS), and all inputs double-checked by another person within the research team.

(vi) Security and confidentiality

All spare timetables / participant names lists, or any document that includes participant names and contact details should either be filed away in a locked filing cabinet or shredded. When not in use, all participant folders should be kept in a locked filing cabinet at all times. The participant database, which contains the family contact details, is encrypted with a password that is only accessible to the research team.

BASELINE DATA COMPLETED AND INPUTTED

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(6) FOLLOW-UP APPOINTMENTS (ALL PARTICIPANTS)

(i) Timetabling

For each participating centre / area, we strive to timetable all baseline visits into a one-week window, and even less (3 or 4 days) for areas that necessitate overnight stays (based on two researchers conducting fieldwork). In order to avoid potential bias, the interview and observation visits should not be conducted by the same researcher, although this is not always possible during intense data collection periods. Once the appointment has been made, either by telephone or letter (see sections (iii) and (iv) below), participant details are entered on the timetable. The trial ID number, parent name and address (including postcode), telephone number(s), as well as the child's name and DOB should be entered into the appropriate block on the timetable (this can be done from the main database via Mail Merge).

Wherever possible, all visits should be scheduled during daylight hours. In cases where this is not possible, and an area is classed as 'high risk', then this is a good opportunity to schedule 'reliability observations', so that researchers only work in pairs during evening visits.

(ii) Appointment by Telephone

Parents are contacted by telephone to schedule 2 follow-up visits.

Basics of call:

- To arrange two follow-up appointments, and recapitulate the structure of the visits:
    - one for questionnaires and developmental assessment with the child (if not already done by HV) which will take between 1 and 1 ½ hours to complete
    - one for observation which takes 40 minutes to complete
- Arrange a convenient time for follow-up visits (anytime between 9am-5pm).

- Remind them that both themselves and the index child will have to be at home for both visits
- For the interview visit, suggest a 'quiet' time of day, when older siblings are more likely to be at school, so that disturbance is kept to a minimum
- Plan visits around child's typical daily routine (i.e. when the child is most likely to be awake and alert)
- Say who will come
- Get directions to house if necessary
- Say that a letter of confirmation will be sent in the post with the dates and times of visits, as well as our contact details

Introduction

Hello, this is X from the Incredible Years Centre at Bangor University. We came to visit you about six months ago now, and it's time to schedule your follow-up visit. Is that OK? We are in your area X (e.g. next week), *and we would like to arrange two visits to come and see you in your home. Like the last time we saw you, we will give you some questionnaires to fill in and do a developmental assessment with X on the first visit. On the second visit we would like to observe you and X again for half an hour.*

Go through the available time slots in the time-table with them until both appointments are booked, and then tell them who will be coming to see them.

So X will be coming to visit on X to do the interview and developmental assessment, and X will be doing the observation on X. We will send out a confirmation letter in the post with the dates and times for you, and it will have our contact number so that you can get in touch if anything crops up and you are unable to keep the appointment.

Thanks and goodbye

Letter of confirmation sent out the same day with first class post (see appendix B)

(iii) Appointment by Letter

Sometimes, at follow-up, the telephone number on the database may no longer be operational, they may not have a contact number, or may not be contactable after several attempts. In such cases, appointments must be made by letter (see appendix L). The letter covers the same basics as the phone call.

In accordance with the University's lone worker policy, it is important that the researcher knows that the appointment was by letter. Despite the fact that we will have visited families before, their circumstances might have changed by now. Therefore 'BY LETTER' should always be added at the bottom of their slot in the timetable.

In cases where families have moved house and have not let the research team know, it might be necessary to contact the group leaders to obtain a forwarding address (NB: families must give verbal consent for their new address to be forwarded to the research team, even though they have consented to take part in the study).

(iv) Preparing Packs for Follow-up

When the timetable for particular centre has been completed, packs are prepared for the two follow-up visits. The necessary paperwork for the follow-up interviews are included in individual red document wallets. The trial ID number, and the centre ID number, as well as venue and date of parenting group is written on the front label of the folder. The name, address, and scheduled time of visit entered on the front cover sheet inside the pack. It can also be useful to note on the front cover sheet any information that we need to ask families (e.g. missing post-code etc). All paperwork required for the visit will already be inside the folders, with the exception of the Ages and Stages Questionnaire. It will be necessary at this stage to calculate the child's age at follow-up and add the corresponding version of the ASQ to the follow-up interview pack.

Street maps are taken from baseline packs and added to the follow-up packs. If maps are missing, then it will be necessary to photocopy new ones.

(v) Participant Payment

The system of paying participants is different at follow-up. All families receive their £25 thank you payment at the end of the observation visit. Therefore cash should be ordered from the finance department before the visits commence. The letters that accompany the payment are slightly different for intervention and control families. This is because this will be the final visit for control families, and the letter includes debriefing (appendix **). The intervention families receive the standard letter of thank you as they will be visited again in six months for a second follow-up. Although it is important that researchers are blind as to participant group status whilst conducting the visits, the researcher must ask at the end of the visit whether they were in the intervention or the control group. This way the visitor will know whether they will be seeing them again in six months time or not, and which letter should accompany their payment.

(7) FOLLOW-UP VISITS 1: INTERVIEW

For your own safety, ALWAYS follow the lone worker policy when conducting home visits (Appendix D). Even in cases where the researcher has visited the family at baseline and felt comfortable in the home, the family circumstances may have changed significantly within six months (e.g. new partner).

(i) Materials required

- Follow-up measures folder, which includes the following documents:
    - Change of address form and freepost envelope
    - Follow-up demographic questionnaire
    - Beck Depression Inventory
    - Parenting Stress Index (short form)
    - Warwick-Edinburgh Maternal Well-being Scale
    - Parenting sense of competence
    - Schedule of Growing Skills Record Form
    - Guidelines for observation visit
- Schedule of Growing Skills Pack
    - Always check that the pack is complete
        - Check for, and replace, missing items (e.g. pegs, blocks, doll, etc)
        - Ensure there is enough plain paper and crayons inside the pack
        - A few spare record forms (for emergencies!)
- Ages and Stages Questionnaire (relevant version for child's age [12-60 months]), needs to be placed in the folder.
- Additional items
    - A few spare follow-up packs (which may come in handy in cases where materials might be missing form your pack)

(ii) Overview of Visit

- Hellos and chat
- Administration (e.g. additional contact details (e.g. get postcode), change address form, and back up address).
- Begin with follow-up demographic questions.
- Give the five questionnaires to the parent and ask them to complete. Or read out each questionnaire for parents who have difficulty reading English.
- Whilst parent completes questionnaires, researcher to complete the developmental assessment (Schedule of Growing Skills) with the index child.
- Give parent home observation guidelines and reiterate briefly what will happen during the observation
- Thank you and goodbye.

(iii) Starting the visit (hellos and chat)

- Introduce self, build rapport with parent, and put parent at ease.

(iv) Admin forms

Give change of address form and freepost envelope.

Can I leave this form with you, so that you can let us know if you change address before our next visit. There is a freepost envelope for you, and in return we will give you five pounds as a thank you for letting us know.

Fill in additional contact details and ask for a backup address (e.g address and telephone number of close family member).

(v) Interview: Follow-up demographics

I'll start by asking you a few background questions. As I said last time, if you feel uncomfortable with any of the questions I ask, you don't have to answer them.

Administer this semi-structured demographic interview first. It takes about 5 minutes to complete

(vi) Parent Questionnaires

After completing the Follow-up Demographic Questionnaire, hand them the five questionnaires.

I'm now going to ask you to fill in some questionnaires (again!). While you're filling them out, I'd like to do a developmental assessment with X (If SOGS needs doing). *Let me know if you have any questions about the questionnaires, or if anything isn't clear.*

(vii) Developmental Assessment: Schedule of Growing Skills

On each subscale, start at a level that is roughly consistent with the child's age, and then move up or down the skills subscale depending on child's performance. Ask parent the parent-reported parts of the SOGS after she has completed the questionnaires. Remember to assess the child on all cognitive items (indicated by circled item numbers).

(viii) Finishing the Visit

Once the SOGS is completed and the questionnaires filled in, thank the family for their time, give them the home observation guidelines, and briefly review the observation process.

Thank you very much for your time, and for filling in those questionnaires … X is coming to see you on X to do the observation. Here are some guidelines about what will happen during the observation (hand out the guidelines). *As you know from last time, it's a half hour observation of you and X interacting as you normally would. For the half hour that she is observing, she wont be able to talk to you because its important that she stays focused on the observation so that she can record what is happening. Remember, she won't be judging how you and X interact, we are just interested in different ways that parents interact with their toddlers. The whole visit should take about 40 minutes. She will also give you your £ 25 as a thank you for taking part before she leaves.*

At this stage we will need to know whether the family was intervention or control. Thanks again for your time, and we will see you again in 6 months time (if intervention).

(8) FOLLOW-UP VISITS 2: OBSERVATION

For your own safety, ALWAYS follow the lone worker policy when conducting home visits (Appendix D).

Even though at follow-up, you may already have visited the family at baseline, their circumstances might have changed (e.g. new partner etc).

(i) Materials required

- Follow-up observation pack comprising:
    - Front cover sheet (with contact details and dates)
    - Six observation sheets (1 sheet per 5 minutes)
    - HOME Inventory
    - Coder Impressions Inventory
- Video camera (make sure there are enough minutes to record observations!)
- Tripod
- Timer
- Extension lead
- Power cable
- Participant Payment:
    - Intervention Families
        - Green payment slip
        - Envelope containing £25 and thank you letter
    - Control Families
        - Green payment slip
        - Envelope containing £25 and thank you / debriefing letter

(ii) Overview of visit

- Putting parent at ease
- Beginning the observation
- Finishing the observation
- Completing the HOME inventory
- Ending the visit

- Completing the Coder impressions Inventory

(iii) Starting the visit (putting parent at ease)

- Hellos and chat
- Review the observation procedure
- Reiterate that you will not be able to talk during the half hour you are observing
- Encourage them to relax, and pretend you (and the camera) are not there!

Hello, I'm X from Bangor University. (say hello and chat a bit with index child too).

I'm sure you'll remember that I won't be able to talk at all whilst I'm doing the observation. Try and pretend I'm not here!! Do you have any questions at all about the observation?

If child is old enough to understand, try to explain the 'no talking' rule to them, too.

X is going to have to do some quiet work now, and I won't be able to talk with you for a while, but I promise I'll tell you when I'm done, so you can show me some of your toys.

(iv) Beginning the observation

Make sure the parent is comfortable with the procedure. Set up the camera to capture where mum and child will be interacting / playing (e.g. on floor space / on sofa / sitting at kitchen table). Ask the parent whether you can plug the camera in their socket, and where the nearest one is. Try to keep the camera close to you, as toddlers typically show very much interest in it! It is also useful to have the camera close, as you can make sure that the parent-child dyad are in shot, and move the position of the camera if possible. The camera also has a minute timer, so it is possible to use this as your timer (but always take a spare one as it's not always possible to have the camera close by).

Once the camera is set up, and the parent and child are ready, begin the observation.

Is it OK for me to start the observation now? Have you got any questions before I start?

- Observe interaction for a total of 30 minutes.
  - Observations are completed in 5-minute segments (1 coding sheet represents 5 minutes of observation time).
  - When each 5-minute interval is completed, stop the clock, and fill in valence details on the reverse of each coding sheet.
  - If any family member absents him or herself from the observation for an extended length of time (over one minute) - for instance to answer the phone: stop the clock and add the time to the top of the form. Also add a note on the coding sheet explaining the extra time added.

CODING TIPS AND CONSIDERATIONS

- Keep your pen moving as much as possible during the observations – this way, the family is not aware of what you are doing (if the parent sees you writing only when she speaks, then she may stop speaking).
- Try to observe children and siblings without giving eye contact (or they may begin 'performing' for the observer).
- Often, the index child might test the rule about you needing to do some 'quiet work'. If they talk to you, laugh in your face, etc., IGNORE THEM: Do not look at them, gasp, laugh, or in any way let them know that you're responding to them.

RELIABILITY OBSERVATIONS (20% of visits)

- When a second coder is present, she will need the same paperwork.
- Both primary and secondary coders will sit / stand together to do the observations when possible.
- Decide who will be the timekeeper.
- At the end of a 5-minute interval, the timekeeper should signal to the other observer that the time segment is complete (e.g. by nodding).
- Each observer uses this time to fill out the valence data for parent and then move on to another segment.
- In order that the observation causes minimal distraction to the family, it is important that observers keep communication to a minimum (non-verbal communication is preferable).

(v) Finishing the observation and completing the HOME Inventory

Turn video off at the end of the half hour section. If parent and child are still happily playing, use a couple of minutes to complete the 'observed' items on the HOME inventory.

Then tell parent that the half hour is over, and ask them how they felt about being observed. Give the child some attention for a few minutes.

Then complete the rest of the items on the HOME inventory, by asking the parent:

Complete the demographic information on the front page, and then complete the remaining items, overleaf.

(vi) Ending the visit

Pack away camera and other materials (remember the power cable!).

At this stage, the researcher must ask the family which group they were allocated to.

If control family – thank them for taking part in the research, and explain that studies like these would not be possible without their help. Give them the envelope with the £25 and thank you letter, and ask them to sign the green participant payment slip.

If intervention family – thank them for their time, and say that we will need to see them again in about 6 months time. Give them the envelope with the £25 and the thank you letter, and ask them to sign the green participant payment slip.

(vii) Completing the Coder Impressions Inventory

If there is time before your next scheduled visit, take a few minutes to complete the Coder Impression Inventory in the car. However, avoid doing this if you are in a high risk area. If this is the case then drive your care somewhere safer.

END OF FOLLOW-UP 1 VISITS

END OF STUDY FOR CONTROL FAMILIES

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(9) ADMINISTRATION AND ORGANISATION OF FOLLOW-UP DATA

(i) Update Database

When follow-up visits have been completed, it is important to update the database to ensure that all information is correct. It is essential that the following information is entered:

- Any missing information
- Notes from visit (if necessary)
- Whether SOGS was done by researcher or whether record and profile form needs to be chased up from health visitors
- Whether there is any missing data that needs to be chased up (e.g. if questionnaires have been left with participant)
- Dates of visits
- Whether the observation was videotaped
- Comments (whether the family looked like they required intervention). This information is taken from the Coder Impressions Inventory, and is rated on a scale from 1 (yes – definitely) to 5 (no – not at all)
- Whether they declined to continue with the research

(ii) Scoring and inputting

When follow-up visits are complete, the observation packs should be placed inside the red follow-up folders, so that all baseline data for a given family are kept together within the one folder. All measures must be scored in accordance with the developers guidelines (see section 1 (v) for administration and scoring information. The individual scores from each measure should then be inputted into the existing SPSS file. At this stage, the participant group status can be added to the database (e.g. Intervention = 0; Control = 1 [for intention to treat analyses], and then more categories to denote participants who have withdrawn from the research for analyses per protocol). All measures should be double scored (e.g. scored up manually, and

then checked against SPSS), and all inputs double checked by another person within the research team.

(iii) Security and confidentiality

All spare timetables / participant names lists, or any document that includes participant names and contact details should either be filed away in a locked filing cabinet or shredded. When not in use, all participant folders should be kept in a locked filing cabinet at all times. The participant database, which contains the family contact details, is encrypted with a password that is only accessible to the research team.

ALL FOLLOW UP DATA COMPLETED, SCORED AND INPUTTED

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(10) FOLLOW-UP 2 APPOINTMENTS (INTERVENTION FAMILIES ONLY)

i. Timetabling

Given that there are less families to visit at this point (intervention group only), we endeavour to schedule all follow-up 2 visits into a three-day window for each participating area, and even less (2 days) for areas that necessitate overnight stays. In order to avoid potential bias, the interview and observation visit should not be conducted by the same researcher, although this is not always possible during intense data collection periods. Once the appointment has been made, either by telephone or by letter, the trial ID number, parent name and address (including postcode), telephone number(s), as well as the child's name and DOB should be entered into the appropriate block on the timetable (this can be done from the main database via Mail Merge).

ii. Appointment by Telephone

Parents are contacted by telephone to schedule 2 follow-up visits.

Basics of call:

- To arrange two follow-up appointments, and recapitulate the structure of the visits:
    - one for questionnaires and developmental assessment with the child (if not already done by HV) which will take between 1 and 1 ½ hours to complete
    - one for observation which takes 40 minutes to complete
- Arrange a convenient time for follow-up visits (anytime between 9am-5pm).
- Remind them that both themselves and the index child will have to be at home for both visits
- For the interview visit, suggest a 'quiet' time of day, when older siblings are more likely to be at school, so that disturbance is kept to a minimum

- Plan visits around child's typical daily routine (i.e. when the child is most likely to be awake and alert)
- Say who will come
- Get directions to house if necessary
- Say that a letter of confirmation will be sent in the post with the dates and times of visits, as well as our contact details

Spiel

Hello, this is X from the Incredible Years Centre at Bangor University. We came to visit you about six months ago now, and it's time to schedule your second follow-up visit. Is that OK? We are in your area X (e.g. next week), *and we would like to arrange two visits to come and see you in your home. Like the last time we saw you, we will give you some questionnaires to fill in and do a developmental assessment with X on the first visit. On the second visit we would like to observe you and X again for half an hour.*

Go through the available time slots in the time-table with them until both appointments are booked, and then tell them who will be coming to see them.

We will send out a confirmation letter in the post with the dates and times for you, and it will have our contact number so that you can get in touch if anything crops up and you are unable to keep the appointment.

Thanks and goodbye

Letter of confirmation sent out the same day with first class post (see appendix B)

iii. Appointment by Letter

Sometimes, at follow-up, the telephone number on the database may no longer be operational, they may not have a contact number, or may not be contactable after several attempts. In such cases, appointments must be made by letter (see appendix L). The letter covers the same basics as the phone call.

In accordance with the University's lone worker policy, it is important that the researcher knows that the appointment was by letter. Despite the fact that we will have visited families before, their circumstances might have changed by now. Therefore 'BY LETTER' should always be added at the bottom of their slot in the timetable.

In cases where families have moved house and have not let the research team know, it might be necessary to contact the group leaders to obtain a forwarding address (NB: families must give verbal consent for their new address to be forwarded to the research team, even though they have consented to take part in the study).

(vi)Preparing Packs for Follow-up 2

When the timetable for particular centre has been completed, packs are prepared for the two follow-up visits. The necessary paperwork for the follow-up interview is already packed in red document wallets. The trial ID number, and the centre ID number, as well as venue and date of parenting group is written on the front label of the folder. The name, address, and scheduled time of visit entered on the front cover sheet inside the pack. It can also be useful to note on the front cover sheet any information that we need to ask families (e.g. missing post-code etc). All paperwork required for the visit will already be inside the folders, with the exception of the Ages and Stages Questionnaire. It will be necessary at this stage to calculate the child's age at follow-up and add the corresponding version of the ASQ to the follow-up interview pack.

Street maps are taken from previous packs and added to the follow-up packs. If maps are missing, then it will be necessary to photocopy new ones.

iv. Participant Payment

As with initial follow-up, families receive their £25 thank you payment at the end of the observation visit. Therefore cash should be ordered from the finance department

before the visits commence. The letters that accompany the payment includes debriefing (appendix *), as this is the last visit for these families.

(12) FOLLOW-UP 2 VISITS 1: INTERVIEW

For your own safety, ALWAYS follow the lone worker policy when conducting home visits (Appendix D). Even in cases where the researcher has visited the family at baseline and felt comfortable in the home, the family circumstances may have changed significantly within six months (e.g. new partner).

i. Materials required

- Follow-up measures folder, which includes the following documents:
    - Change of address form and freepost envelope
    - Follow-up demographic questionnaire
    - Beck Depression Inventory
    - Parenting Stress Index (short form)
    - Warwick-Edinburgh Maternal Well-being Scale
    - Parenting sense of competence
    - Schedule of Growing Skills Record Form
    - Guidelines for observation visit
- Schedule of Growing Skills Pack
    - Always check that the pack is complete
        - Check for, and replace, missing items (e.g. pegs, blocks, doll, etc)
        - Ensure there is enough plain paper and crayons inside the pack
        - A few spare record forms (for emergencies!)
- Ages and Stages Questionnaire (relevant version for child's age [12-60 months]), needs to be placed in the folder.
- Additional items

- A few spare follow-up packs (which may come in handy in cases where materials might be missing form your pack)

ii. Overview of Visit

- Hellos and chat
- Begin with follow-up demographic questions.
- Give the five questionnaires to the parent and ask them to complete. Or read out each questionnaire for parents who have difficulty reading English.
- Whilst parent completes questionnaires, researcher to complete the developmental assessment (Schedule of Growing Skills) with the index child.
- Give parent home observation guidelines and reiterate briefly what will happen during the observation
- Thank you and goodbye.

iii. Starting the visit (hellos and chat)

- Introduce self, build rapport with parent, and put parent at ease.

iv. Interview: Follow-up demographics

I'll start by asking you a few background questions. As I said last time, if you feel uncomfortable with any of the questions I ask, you don't have to answer them.

Administer this semi-structured demographic interview first. It takes about 5 minutes to complete

v. Parent Questionnaires

After completing the Follow-up Demographic Questionnaire, hand them the five questionnaires.

I'm now going to ask you to fill in some questionnaires (again!). While you're filling them out, I'd like to do a developmental assessment with X (If SOGS needs doing). *Let me know if you have any questions about the questionnaires, or if anything isn't clear.*

vi. Developmental Assessment: Schedule of Growing Skills

On each subscale, start at a level that is roughly consistent with the child's age, and then move up or down the skills subscale depending on child's performance. Ask parent the parent-reported parts of the SOGS after she has completed the questionnaires. Remember to assess the child on all cognitive items (indicated by circled item numbers).

vii. Finishing the Visit

Once the SOGS is completed and the questionnaires filled in, thank the family for their time, give them the home observation guidelines, and briefly review the observation process.

Thank you very much for your time, and for filling in those questionnaires … X is coming to see you on X to do the observation. Here are some guidelines about what will happen during the observation (hand out the guidelines). *As you know from last time, it's a half hour observation of you and X interacting as you normally would. For the half hour that she is observing, she wont be able to talk to you because its important that she stays focused on the observation so that she can record what is happening. Remember, she won't be judging how you and X interact, we are just interested in different ways that parents interact with their toddlers. The whole visit should take about 40 minutes. She will also give you your £ 25 as a thank you for taking part before she leaves.*

Thanks again for your time, and for their invaluable contribution to the research. Perhaps state that we might be interested in conducting a future follow-up, in which case we will contact them again, if they're willing.

(12) FOLLOW-UP 2 VISITS 2: OBSERVATION

For your own safety, ALWAYS follow the lone worker policy when conducting home visits (Appendix D).

Even though at follow-up, you may already have visited the family at baseline, their circumstances might have changed (e.g. new partner etc).

i. Materials required

- Follow-up observation pack comprising:
    - Front cover sheet (with contact details and dates)
    - Six observation sheets (1 sheet per 5 minutes)
    - HOME Inventory
    - Coder Impressions Inventory
- Video camera (make sure there are enough minutes to record observations!)
- Tripod
- Timer
- Extension lead
- Power cable
- Participant Payment:
    - Intervention Families
        - Green payment slip
        - Envelope containing £25 and thank you letter
    - Control Families
        - Green payment slip
        - Envelope containing £25 and debriefing letter

ii. Overview of visit

1. Putting parent at ease

2. Beginning the observation
3. Finishing the observation
4. Completing the HOME inventory
5. Ending the visit
6. Completing the Coder impressions Inventory

iii. Starting the visit (putting parent at ease)

- Hellos and chat
- Review the observation procedure
- Reiterate that you will not be able to talk during the half hour you are observing
- Encourage them to relax, and pretend you (and the camera) are not there!

Hello, I'm X from Bangor University. (say hello and chat a bit with index child too).

I'm sure you'll remember that I won't be able to talk at all whilst I'm doing the observation. Try and pretend I'm not here!! Do you have any questions at all about the observation?

If child is old enough to understand, try to explain the 'no talking' rule to them, too.

X is going to have to do some quiet work now, and I won't be able to talk with you for a while, but I promise I'll tell you when I'm done, so you can show me some of your toys.

iv. Beginning the observation

Make sure the parent is comfortable with the procedure. Set up the camera to capture where mum and child will be interacting / playing (e.g. on floor space / on sofa / sitting at kitchen table). Ask the parent whether you can plug the camera in their socket, and where the nearest one is. Try to keep the camera close to you, as toddlers typically show very much interest in it! It is also useful to have the

camera close, as you can make sure that the parent-child dyad are in shot, and move the position of the camera if possible. The camera also has a minute timer, so it is possible to use this as your timer (but always take a spare one as it's not always possible to have the camera close by).

Once the camera is set up, and the parent and child are ready, begin the observation.

Is it OK for me to start the observation now? Have you got any questions before I start?

- Observe interaction for a total of 30 minutes.
  - Observations are completed in 5-minute segments (1 coding sheet represents 5 minutes of observation time).
  - When each 5-minute interval is completed, stop the clock, and fill in valence details on the reverse of each coding sheet.
  - If any family member absents him or herself from the observation for an extended length of time (over one minute) - for instance to answer the phone: stop the clock and add the time to the top of the form. Also add a note on the coding sheet explaining the extra time added.

CODING TIPS AND CONSIDERATIONS

- Keep your pen moving as much as possible during the observations – this way, the family is not aware of what you are doing (if the parent sees you writing only when she speaks, then she may stop speaking).
- Try to observe children and siblings without giving eye contact (or they may begin 'performing' for the observer).
- Often, the index child might test the rule about you needing to do some 'quiet work'. If they talk to you, laugh in your face, etc., IGNORE THEM: Do not look at them, gasp, laugh, or in any way let them know that you're responding to them.

RELIABILITY OBSERVATIONS (20% of visits)

- When a second coder is present, she will need the same paperwork.
- Both primary and secondary coders will sit / stand together to do the observations when possible.
- Decide who will be the timekeeper.
- At the end of a 5-minute interval, the timekeeper should signal to the other observer that the time segment is complete (e.g. by nodding).
- Each observer uses this time to fill out the valence data for parent and then move on to another segment.
- In order that the observation causes minimal distraction to the family, it is important that observers keep communication to a minimum (non-verbal communication is preferable).

v. Finishing the observation and completing the HOME Inventory

Turn video off at the end of the half hour section. If parent and child are still happily playing, use a couple of minutes to complete the 'observed' items on the HOME inventory.

Then tell parent that the half hour is over, and ask them how they felt about being observed. Give the child some attention for a few minutes.

Then complete the rest of the items on the HOME inventory, by asking the parent:

Complete the demographic information on the front page, and then complete the remaining items, overleaf.

vi. Ending the visit

Pack away camera and other materials (remember the power cable).

As this is their final visit thank them for taking part in the research. and explain that studies like these would not be possible without their help. Give them the envelope with the £25 and thank you letter, and ask them to sign the green participant payment slip. Take this opportunity to encourage them to ask any questions about the research.

Also say that we might be interested in conducting another follow-up at a later date, and would they be happy to be contacted should this occur.

vii. Completing the Coder Impressions Inventory

If there is time before your next scheduled visit, take a few minutes to complete the Coder Impression Inventory in the car. However, avoid doing this if you are in a high risk area. If this is the case then drive your care somewhere safer

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END OF FOLLOW-UP 2 VISITS

END OF VISITS

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(13) ADMINISTRATION AND ORGANISATION OF FOLLOW-UP DATA

i. Update Database

When follow-up visits have been completed, it is important to update the database to ensure that all information is correct. It is essential that the following information is entered:

- Any missing information
- Notes from visit (if necessary)
- Whether SOGS was done by researcher or whether record and profile form needs to be chased up from health visitors
- Whether there is any missing data that needs to be chased up (e.g. if questionnaires have been left with participant)
- Dates of visits
- Whether the observation was videotaped
- Comments (whether the family looked like they required intervention). This information is taken from the Coder Impressions Inventory, and is rated on a scale from 1 (yes – definitely) to 5 (no – not at all)
- Whether they declined to continue with the research

ii. Scoring and inputting

When follow-up visits are complete, the observation packs should be placed inside the red follow-up folders, so that all baseline data for a given family are kept together within the one folder. All measures must be scored in accordance with the protocol of measures. The individual scores from each measure should then be inputted into the existing SPSS file. All measures should be double scored (e.g. scored up manually, and then checked against SPSS), and all inputs double checked by another person within the research team.

(iii) Security and confidentiality

All spare timetables / participant names lists, or any document that includes participant names and contact details should either be filed away in a locked filing cabinet or shredded. When not in use, all participant folders should be kept in a locked filing cabinet at all times. The participant database, which contains the family contact details, is encrypted with a password that is only accessible to the research team

ALL FOLLOW UP 2 DATA COMPLETED, SCORED AND INPUTTED

APPENDIX B

Project timetable

Oct – Dec 07
NG - Literature review of developmental and observational measures and decision on best developmental measure

Jan – March 08
NG and RO develop observational coding measure for parent-child interaction based on existing DPICS codes plus programme specific items relevant to younger children and finalise other measures
AO to purchase measures and co-ordinate materials for use in the assessments
JH to deliver the new programme on a trial basis and develop add on training

April – June 08
RO and NG field test observational measure and with AO build liaison with the participating Authorities and recruitment of North Wales services.

July – Sept 08
RO, NG and AO appointments and baseline measures for North Wales groups and build liaison with second group of three services
AO to prepare programme materials for North Wales group leaders
JH to deliver programme specific training to group leaders for first three groups

Oct – Dec 08
JH to supervise delivery of interventions in North Wales services
RO, NG and AO recruit and baseline for second, South Wales groups.
AO to prepare programme materials for group leaders

Jan – March 09
JH to supervise delivery of intervention for second groups,
RO, NG and AO to undertake six-month follow-up for first groups

April – June 09
RO, NG and AO to undertake six-month follow-up for second groups
Recruit additional research staff to undertake second follow-up

July – December 09
New research staff to undertake 12-month follow up for both sets of groups (intervention families only) - developmental assessment and parent report only (excludes observational measures of parenting at this stage so with reduced numbers and no observational data this phase can be done by one person).

October 2009 – September 2010
PhD write up and submission of papers for publication by PhD student and JH

(scoring, rescoring for reliability, coding and data-basing of all data to be done throughout the project)

APPENDIX C

List of Measures

- Personal Data and Health Questionnaire (PDHQ; Hutchings, 1996)
- Schedule of Growing Skills (Bellman, Lingham & Aukett, 1996)
- Beck Depression Inventory II (Beck, Ward, Steer & Brown, 1996)*
- Warwick-Edinburgh Mental Wellbeing Scale (NHS Health Scotland, 2006)*
- Parenting Stress Index (Abidini, 1990)*
- Parenting Sense of Competence (Johnson & Mash, 1989)*
- Infant & Toddler Home Observation for Measurement of the Environment (Caldwell & Brady, 2003)
- Dyadic Parent-Child Interaction Coding System (Eyberg & Robinson, 2000)

APPENDIX D

Participant ID: ( ) ( ) ( ) Date: ( ) ( ) ( ) ( ) ( ) ( )

Personal Data and Health Questionnaire

(1) BACKGROUND DETAILS

1a. Child's DOB ..... Child's Age ..... Sex: M F
1b. Carer's DOB ..... Carer's Age ..... Sex: M F

1c. What is your preferred language for speaking.....for reading.....

1d. What is your child's preferred language for speaking.....

1e. Relationship to child:

Biological parent Step-parent

Parent's partner (living together) Adoptive parent

Foster parent Other adult relative (state)

1f. How old were you when your first child was born?.....

2. PREGNANCY

2a. Did you have any problems during pregnancy?

2b. Were there any problems / difficulties at the time of the child's birth?

3. CHILD'S HEALTH AND DEVELOPMENT

3a. Was your child easy to manage as a baby?

3b. Has your child suffered any health problems so far, apart from normal childhood illnesses) or sustained serious injuries?

3c. Has your child ever been in hospital? (if yes, please state reason, and how many times)?

3d. How would you describe (child's) development so far (in terms of things that most children do – such as walking/ talking etc).

3e. Do you have any concerns about your child's health / development?

3f. (if child has been referred) In terms of the problem your child has been referred for, what is causing you most concern at the moment?

3g. How long have you had these concerns / how long have these problems been going on? Age of onset?

3h. Anything else that you would like to tell us about (child's) health or development?

3i. Have you sought any treatment for your child's problems?

3j. Have you ever attended a Webster-Stratton Incredible Years Parenting Programme?

4. CARER'S HEALTH

4a. Have you suffered any significant health problems since the birth of your child?

4b. Parents of children who display difficult behaviour often report feeling low / helpless / depressed as a result. Do you / have you felt that your child's behaviour has ever had this effect on you?

4c. Are you currently on any medication?

5. OTHER HOUSEHOLD / FAMILY MEMBERS

5a. What is your marital status?

Single, never married

Living together

Separated

Widowed

Divorced

In relationship but living apart

Married

5b. Spouse / partner's relationship to child:

Biological parent

Step-parent

Parent's partner (living together)

Adoptive parent

Foster parent

Other adult relative

5c. How involved is your partner with the upbringing of your child (index)?

5d. Would they be available to join the parenting group?

5f. Who else shares your household?

(*include siblings of index child and ages and DOB*)

.....

.....

6. FAMILY HEALTH

6a. Have any other family members had serious health problems?

6b. To your knowledge, has any member of your family ever had problems with drugs? and/or alcohol?

6c. So what is the current situation?

.....

6d. Have ANY of your children (or any other member of your family) - to your knowledge - been in trouble with the police (or been involved in any form of criminal activity)?

7. RELATIONSHIPS (if applicable)

7a. Parents of children who show some difficult behaviour sometimes claim that these problems have an effect on their adult relationship(s). Do you feel that your child's behaviour is having such an effect on your relationship with your partner?

.....

7b. (If in relationship) How would you rate the quality of your relationship with your partner?

Bad

Poor

Mixed

Good

Excellent

8. HOUSING

8a. Is your home:

Owned

Council / housing association rented

Privately rented unfurnished

Privately rented furnished

Other

Please give details……..

8b. Condition of the building (RATED BY RESEARCHER)

Good……Acceptable……Substandard

8c. How many bedrooms do you have use of?

9. PRIMARY CARER'S EDUCATION

9a. How old were you when you left school?

9b. Did you gain any qualifications at school?

9c. Did you receive further or higher education after leaving school (e.g. College, NVQs, YTS etc.)?

10. INCOME

10a. Income: Which category would best describe your total weekly income? That is what you actually get in each week to spend on living costs.

£200 or below

£201 - £250

£251 - £300

£301 or above

10b. Is this income made up mostly of:

State benefits (such as Job seeker's allowance / income support)

Other benefits that subsidise wages (e.g. WFTC)
Maintenance payments for child(ren)
Wages
Other

APPENDIX E

chwarae • dysgu • tyfu
play • learn • grow
dechrau'n deg • flying start

RHESTR SGILIAU TYFU II
SCHEDULE OF GROWING SKILLS II

GL assessment
the measure of potential

Ffurflen Gofnod/Record Form

Rhif Achos/Rhif GIC

Enw

Cyfeiriad

Enw a Chyfeiriad Meddyg Teulu

Dyddiad Geni D D / M M / B B

Dyddiad Geni Disgwyliedig D D / M M / B B

Rhyw Gwryw / Benyw (cylchwch os gwelwch yn dda)

Grŵp ethnig

Dehonglwr (ticiwch os defnyddiwyd un)

Case / NHS No.

Name

Address

GP Name & Address

Date of Birth D D / M M / Y Y

Expected Date of Birth D D / M M / Y Y

Gender Male / Female (please circle)

Ethnic Group

Interpreter (tick if used)

	Asesiad Un Assessment One	Asesiad Dau Assessment Two	Asesiad Tri Assessment Three	Asesiad Pedwar Assessment Four
Aseswyd gan (ticiwch un) Assessed by (please tick one)	☐ Lleoliad Dechrau'n Deg ☐ Ymwelydd Iechyd Dechrau'n Deg ☐ Flying Start Setting ☐ Flying Start Health Visitor	☐ Lleoliad Dechrau'n Deg ☐ Ymwelydd Iechyd Dechrau'n Deg ☐ Flying Start Setting ☐ Flying Start Health Visitor	☐ Lleoliad Dechrau'n Deg ☐ Ymwelydd Iechyd Dechrau'n Deg ☐ Flying Start Setting ☐ Flying Start Health Visitor	☐ Lleoliad Dechrau'n Deg ☐ Ymwelydd Iechyd Dechrau'n Deg ☐ Flying Start Setting ☐ Flying Start Health Visitor
Dyddiad Date	D/D M/M B/Y	D/D M/M B/Y	D/D M/M B/Y	D/D M/M B/Y
Oed Age	M/M B/Y	M/M B/Y	M/M B/Y	M/M B/Y
Sylwadau Comments				
Gweithred Action				
Archwiliwr Examiner				

Screening Dates					
MANIPULATIVE SKILLS (CONT)					
Bricks					
(55) ■ Tower of 2 bricks	1				
(56) ■ Tower of 3 bricks	2				
(57) ■ Tower of 4 to 6 bricks	3				
(58) ■ Tower of 7+ bricks	4				
(59) ■ Imitates bridge	5				
(60) ■ Builds 3 steps with 6 bricks after demonstration	6				
Drawing					
(61) ■ To and fro scribbles	1				
(62) ■ Circular scribbles	2				
(63) ■ Imitates vertical and/or horizontal line	3				
(64) ■ Imitates circle	4				
(65) ■ Imitates cross	5				
(66) ■ Imitates square	6				
Draw-a-Person Test					
(67) ■ Child draws head and one other part	1				
(68) ■ Child draws head, legs and arms (two)	2				
(69) ■ Child draws face, trunk, legs, arms	3				
MANIPULATIVE SKILLS SCORE					

VISUAL SKILLS					
Visual Function					
70. ■ Turns towards diffuse light	1				
71. ■ Briefly fixates on pom-pom at 30 cm	2				
72. ■ Follows dangling object through 90°	3				
73. ■ Follows dangling object through 180°	4				
74. ■ Converges eyes on approaching object	5				
75. ■ Finger points accurately at small object	6				
Visual Comprehension					
(76) ■ Watches falling toy but does not look for it on the ground (no object permanence)	1				
(77) ■ Looks towards the correct place for fallen toy (object permanence)	2				
(78) ■ Searches for the lost toy	3				
(79) Watches movements for people at distance or out of window with interest	4				
(80) Finger points to distant objects	5				
(81) ■ Shows interest in pictures	6				
(82) ■ Recognizes details of Picture Book	7				
(83) ■ Completes shape formboard	8				
(84) ■ Completes fish formboard	9				
(85) ■ Recognizes minute details of the picture	10				
(86) ■ Matches 2 colours	11				
(87) ■ Matches 4 colours	12				
(88) ■ Matches all 10 colour cards	13				
89. ■ Cooperates with linear chart vision test (6 metres)	14				
VISUAL SKILLS SCORE					

Screening Dates					
HEARING AND LANGUAGE SKILLS					
Hearing Function					
90. Startled by sudden noise	1				
91. Responds to voice	2				
92. Looks towards sound of parent's voice	3				
Comprehension of Language					
93. Turns head towards sound source	1				
94. Is attentive to everyday sounds	2				
95. Understands 'no'/'bye-bye'	3				
96. Recognizes own name	4				
97. Shows understanding of names of familiar objects or people	5				
98. ■ Can select 2 out of 4 objects	6				
99. Can point to 2 named body parts (e.g. nose and hands)	7				
100. ■ Can point to doll's body parts (e.g. eyes, tummy)	8				
101. ■ Follows a two-part command	9				
102. ■ Shows understanding of verbs, using action pictures	10				
■ Shows understanding of functions of objects, using pictures	11				
104. ■ Shows understanding of prepositions	12				
105. ■ Shows understanding of size adjectives	13				
■ Shows understanding of negatives	14				
107. ■ Follows a command with two instructions	15				
108. ■ Understands complicated questions	16				
109. ■ Follows a command with three instructions	17				
110. ■ Understands negatives in complex sentence statements	18				
HEARING AND LANGUAGE SKILLS SCORE					

SPEECH AND LANGUAGE SKILLS					
Vocalization					
111. Makes occasional grunting sounds	1				
112. Vocalizes when pleased	2				
113. Laughs, chuckles and squeals in play	3				
114. Babbles continually and tunefully	4				
115. Imitates adults, playful sounds (coughs, 'brrr', smacks lips)	5				
Expressive Language					
116. Uses incessant jargon containing vowels and many consonants	1				
117. Uses one word with meaning	2				
118. Communicates by mixed gesture and vocalization	3				
119. Uses several words with meaning (at least 4)	4				
120. Uses more than 7 words with meaning	5				
121. Attempts to repeat words when used by others	6				

 (continued on page 7)

APPENDIX F

Participant ID:_____
Date:_____

Parenting Sense of Competence

This is a questionnaire about your attitudes and feelings that relate to parenting.
Please circle the answer that most closely resembles how you feel.

	Strongly agree	Agree	Unsure	Disagree	Strongly disagree
The problems of taking care of a child are easy to solve once you know how your actions affect your child – an understanding I have acquired.	5	4	3	2	1
Even though being a parent can be rewarding, I am frustrated now while my child is at his/her present age.	5	4	3	2	1
I do not know why it is, but sometimes when I'm supposed to be in control, I feel more like the one being manipulated.	5	4	3	2	1
Being a parent is manageable, and any problems are easily solved.	5	4	3	2	1
Being a parent makes me tense and anxious.	5	4	3	2	1
I would make a fine model for a new mother/father to follow in order to learn what she/he would need to know in order to be a good parent.	5	4	3	2	1
I go to bed the same way that I wake up in the mornings: feeling like I have not achieved very much.	5	4	3	2	1
My mother/father was better prepared to be a good mother/father than I am.	5	4	3	2	1

A difficult problem in being a parent is not knowing whether you're doing a good job or a bad one.	5	4	3	2	1
I meet my own personal expectations for expertise in caring for my child.	5	4	3	2	1
If anyone can find the answer to what is troubling my child, I am the one.	5	4	3	2	1
Sometimes I feel like I'm not getting anything done.	5	4	3	2	1
Considering how long I've been a mother/father, I feel thoroughly familiar with this role.	5	4	3	2	1
My talents and interests are in other areas – not being a parent	5	4	3	2	1
If being a mother/father of a child were only more interesting, I would be better motivated to do a better job as a parent.	5	4	3	2	1
I honestly believe I have all the skills necessary to be a good mother/father to my child.	5	4	3	2	1
Being a good mother/father is a reward in itself.	5	4	3	2	1

APPENDIX G

_____ Gender ____ Date of birth _____ Ethnic group _____ Marital status _____

name_____ Child's gender _____ Child's date of birth _____ Today's date _____

A = Strongly Agree **A = Agree** **NS = Not Sure** **D = Disagree** **SD = Strongly Disagree**

often have the feeling that I cannot handle things very well.	SA	A	NS	D	SD
find myself giving up more of my life to meet my children's needs than I ever expected.	SA	A	NS	D	SD
feel trapped by my responsibilities as a parent.	SA	A	NS	D	SD
nce having this child, I have been unable to do new and different things.	SA	A	NS	D	SD
nce having a child, I feel that I am almost never able to do things that I like to do.	SA	A	NS	D	SD
am unhappy with the last purchase of clothing I made for myself.	SA	A	NS	D	SD
here are quite a few things that bother me about my life.	SA	A	NS	D	SD
aving a child has caused more problems than I expected in my relationship with my spouse r male/female friend).	SA	A	NS	D	SD
feel alone and without friends.	SA	A	NS	D	SD
hen I go to a party, I usually expect not to enjoy myself.	SA	A	NS	D	SD
am not as interested in people as I used to be.	SA	A	NS	D	SD
don't enjoy things as I used to.	SA	A	NS	D	SD
y child rarely does things for me that make me feel good.	SA	A	NS	D	SD
metimes I feel my child doesn't like me and doesn't want to be close to me.	SA	A	NS	D	SD
y child smiles at me much less than I expected.	SA	A	NS	D	SD
hen I do things for my child, I get the feeling that my efforts are not appreciated very much.	SA	A	NS	D	SD
hen playing, my child doesn't often giggle or laugh.	SA	A	NS	D	SD
y child doesn't seem to learn as quickly as most children.	SA	A	NS	D	SD
y child doesn't seem to smile as much as most children.	SA	A	NS	D	SD
y child is not able to do as much as I expected.	SA	A	NS	D	SD
takes a long time and it is very hard for my child to get used to new things.	SA	A	NS	D	SD

next statement, choose your response from the choices "1" to "5" below.

eel that I am:

1. not very good at being a parent
2. a person who has some trouble being a parent
3. an average parent
4. a better than average parent
5. a very good parent

	1	2	3	4	5

xpected to have closer and warmer feelings for my child than I do and this bothers me.	SA	A	NS	D	SD
metimes my child does things that bother me just to be mean.	SA	A	NS	D	SD
child seems to cry or fuss more often than most children.	SA	A	NS	D	SD
child generally wakes up in a bad mood.	SA	A	NS	D	SD
el that my child is very moody and easily upset.	SA	A	NS	D	SD
child does a few things which bother me a great deal.	SA	A	NS	D	SD
child reacts very strongly when something happens that my child doesn't like.	SA	A	NS	D	SD
child gets upset easily over the smallest thing.	SA	A	NS	D	SD
child's sleeping or eating schedule was much harder to establish than I expected.	SA	A	NS	D	SD

next statement, choose your response from the choices "1" to "5" below.

ve found that getting my child to do something or stop doing something is:

1. much harder than I expected
2. somewhat harder than I expected
3. about as hard as I expected
4. somewhat easier than I expected

	1	2	3	4	5

APPENDIX H

BDI-II

Date:

Name: _____ Marital Status: _____ Age: _____ Sex: _____

Occupation: _____ Education: _____

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today**. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness

0 I do not feel sad.
1 I feel sad much of the time.
2 I am sad all the time.
3 I am so sad or unhappy that I can't stand it.

2. Pessimism

0 I am not discouraged about my future.
1 I feel more discouraged about my future than I used to be.
2 I do not expect things to work out for me.
3 I feel my future is hopeless and will only get worse.

3. Past Failure

0 I do not feel like a failure.
1 I have failed more than I should have.
2 As I look back, I see a lot of failures.
3 I feel I am a total failure as a person.

4. Loss of Pleasure

0 I get as much pleasure as I ever did from the things I enjoy.
1 I don't enjoy things as much as I used to.
2 I get very little pleasure from the things I used to enjoy.
3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings

0 I don't feel particularly guilty.
1 I feel guilty over many things I have done or should have done.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

6. Punishment Feelings

0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.

7. Self-Dislike

0 I feel the same about myself as ever.
1 I have lost confidence in myself.
2 I am disappointed in myself.
3 I dislike myself.

8. Self-Criticalness

0 I don't criticize or blame myself more than usual.
1 I am more critical of myself than I used to be.
2 I criticize myself for all of my faults.
3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes

0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

10. Crying

0 I don't cry anymore than I used to.
1 I cry more than I used to.
2 I cry over every little thing.
3 I feel like crying, but I can't.

_____ Subtotal Page 1

Continued on Back

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APPENDIX I

The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

Below are some statements about feelings and thoughts.

Please tick the box that best describes your experience of each over the last 2 weeks

STATEMENTS	None of the time	Rarely	Some of the time	Often	All of the time
ve been feeling optimistic about the ıture					
ve been feeling useful					
ve been feeling relaxed					
ve been feeling interested in other eople					
ve had energy to spare					
ve been dealing with problems well					
ve been thinking clearly					
ve been feeling good about myself					
ve been feeling close to other people					
ve been feeling confident					
ve been able to make up my own mind bout things					
ve been feeling loved					
ve been interested in new things					
ve been feeling cheerful					

Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)

APPENDIX J

Infant/Toddler HOME Record Form

Place a plus (+) or minus (-) in the box alongside each item depending on whether the behavior is observed during the visit, or if the parent reports that the conditions or events are characteristic of the home environment. Enter the subtotals and the total on the Summary Sheet. **Observation (O), Either (E), or Interview (I) is indicated for each item.**

I. RESPONSIVITY		24. Child has a special place for toys and treasures. **E**	
1. Parent permits child to engage in "messy" play. **I**		25. Child's play environment is safe. **O**	
2. Parent spontaneously vocalizes to child at least twice. **O**		**IV. LEARNING MATERIALS**	
3. Parent responds verbally to child's vocalizations or verbalizations. **O**		26. Muscle activity toys or equipment. **E**	
4. Parent tells child name of object or person during visit. **O**		27. Push or pull toy. **E**	
5. Parent's speech is distinct, clear, and audible. **O**		28. Stroller or walker, kiddie car, scooter, or tricycle. **E**	
6. Parent initiates verbal interchanges with Visitor. **O**		29. Cuddly or role-playing toys. **E**	
7. Parent converses freely and easily. **O**		30. Learning facilitators—mobile, table and chair, high chair, play pen. **E**	
8. Parent spontaneously praises child at least twice. **O**		31. Simple eye-hand coordination toys. **E**	
9. Parent's voice conveys positive feelings toward child. **O**		32. Complex eye-hand coordination toys. **E**	
10. Parent caresses or kisses child at least once. **O**		33. Toys for literature and music. **E**	
11. Parent responds positively to praise of child offered by Visitor. **O**		34. Parent provides toys for child to play with during visit. **O**	
II. ACCEPTANCE		**V. INVOLVEMENT**	
12. No more than 1 instance of physical punishment during past week. **I**		35. Parent talks to child while doing household work. **I**	
13. Family has a pet. **E**		36. Parent consciously encourages developmental advance. **I**	
14. Parent does not shout at child. **O**		37. Parent invests maturing toys with value via personal attention. **I**	
15. Parent does not express overt annoyance with or hostility to child. **O**		38. Parent structures child's play periods. **I**	
16. Parent neither slaps nor spanks child during visit. **O**		39. Parent provides toys that challenge child to develop new skills. **I**	
17. Parent does not scold or criticize child during visit. **O**		40. Parent keeps child in visual range, looks at often. **O**	
18. Parent does not interfere with or restrict child more than 3 times during visit. **O**		**VI. VARIETY**	
19. At least 10 books are present and visible. **E**		41. Father provides some care daily. **I**	
III. ORGANIZATION		42. Parent reads stories to child at least 3 times weekly. **I**	
20. Child care, if used, is provided by one of 3 regular substitutes. **I**		43. Child eats at least one meal a day with mother and father. **I**	
21. Child is taken to grocery store at least once a week. **I**		44. Family visits relatives or receives visits once a month or so. **I**	
22. Child gets out of house at least 4 times a week. **I**		45. Child has 3 or more books of his/her own. **E**	
23. Child is taken regularly to doctor's office or clinic. **I**			
TOTALS I_____ II_____ III_____ IV_____ V_____ VI_____ TOTAL _____			

APPENDIX K

A	D	Parent Behaviours	Total	Child Behaviours	Total	A	D
		Physical Intrusion		Physical Negative			
		Physical Negative					
		Parent Ignore		Destructive			
		Critical Statement					
		Negative command		Smart Talk			
		Physical Positive					
		Positive Affect		Cry / Whine / Yell			
		Unlabeled praise					
		Labeled praise		Positive Affect Nonverbal			
		Acknowledgement					
		Question		Positive Affect Verbal			
		Descriptive Question / Enc		Physical Warmth			
		Verbal Questioning					
		Reflective Question					
		Reflective Statement					
		Statement					
		Descriptive Comm / Enc					
		Verbal labelling					
		Communication coaching					
		Emotion coaching (d code)					
		Indirect command					
		No Opp					
		Compliance					
		Noncompliance					
		Direct command					
		No Opp		Marital Critical Statements	NA / M / F		
		Compliance		Sibling Deviance			
		Noncompliance					
		Grandma's Rule		Reliability: A = D = Total = Reliability (%) =			
		No Opp					
		Compliance					
		Noncompliance					
		Warning					
		No Opp					
		Compliance					
		Noncompliance					

APPENDIX L

Incredible Years Toddler programme end of programme parent satisfaction and leader adherence evaluation.

The evaluation of the IY 12-week toddler programme in Wales began in 2007 and has just finished after 3 years. The programme was delivered in 8 Flying Start areas across Wales and data was collected at 3 time points, 6 months apart to include parent reports and independent observations.

At the end of each session parents completed satisfaction questionnaires about that particular week. Also, at the end of the programme parents completed an overall programme satisfaction questionnaire to include feedback on the programme itself and the leaders. In addition leaders completed weekly checklists to ensure programme adherence and implementation fidelity. Results of attendance levels were varied, as some attendance sheets were missing or incomplete, therefore attendance levels on the programme may be inaccurate although they seem quite satisfactory. The percentage of parents attending 8 or more sessions (3/4 of all sessions) was 59%. Leaders' checklists suggest 90% of programme activities were covered by leaders across all centres and sessions. There was an unexpected drop in weeks 2 and 6. Due to leaders recording that buddy calls had not been done.

Results of end of programme parent satisfaction questionnaires can be seen in figure 2. The reason for the low scores on teaching format was due to low ratings on 'buddy calls', participants rated them 'useless' or 'not done'. This may be a reflection of fidelity rather than quality of the programme, and participants also rated the video vignettes slightly lower than the other teaching formats. All leaders were rated very highly on both weekly, and end of, programme satisfaction questionnaires, this was true across all centres. Parents found discussions very useful, these were most highly rated and parents said they enjoyed interacting with other parents. Satisfaction levels were above 3 (out of 4) for the weekly questionnaires and above 5.8 (out of 7) for the end of programme questionnaire, therefore satisfaction levels were very high throughout.

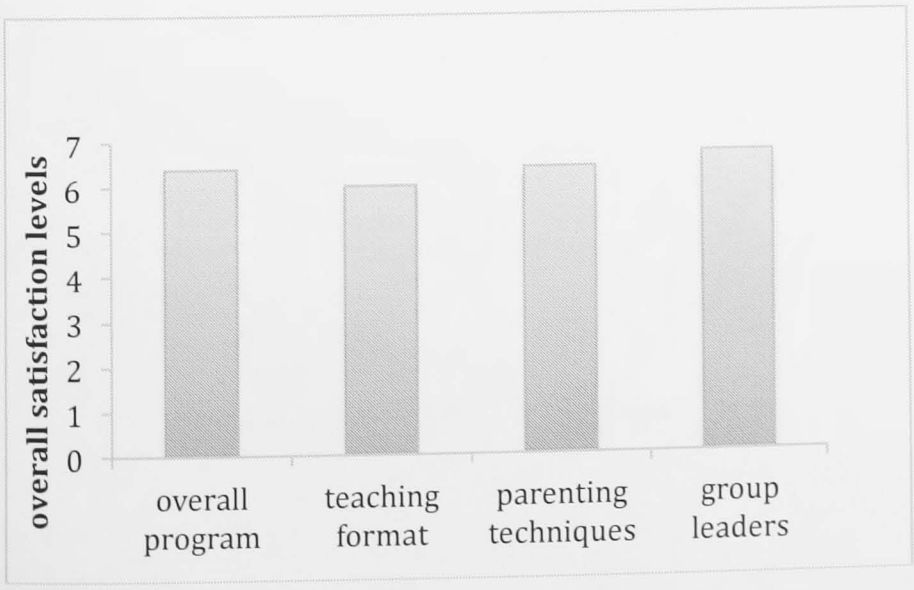

Figure 2. End of programme evaluations by parents

APPENDIX M

Ysgol Seicoleg
Llawr Isaf
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May 17, 2008

Dear All,

Researching and evaluating the Incredible Years Infant and Toddler programmes

The Incredible Years Wales research team are preparing for the first evaluation of the Incredible Years Infant and Toddler parent programmes designed by Professor Carolyn Webster-Stratton to promote children's early development. Part of the evaluation is funded by the Welsh Assembly Government and will run throughout Wales. For the first groups the Incredible Years research team are looking to recruit participating services, from service providers in north Wales and Powys.

We are looking for two types of partners, three services to participate in a structured randomised control trial (RCT) of the toddler programme, and others who will be delivering the Infant and Toddler programmes and are able to administer a set of before and after measures to the families who had attended their programme.

Partners in the RCT trial

Service participating in the randomised control trial (RCT) would assist the research team in recruiting families, provide experienced group leaders to deliver the programme to 12 families of children aged 12-36 months, four of whom will be control families who must be offered the programme after six months once the initial group and follow-up measures are completed, crèche facilities and adequate time for staff to attend supervision.

Benefits to services participating in the RCT trial include provision of leader files, parent handouts and raffle prizes etc. and high quality weekly supervision throughout the 12 weeks of the course. The research team will also provide evaluation data to services as well as financial incentives for participating families who will be observed in their own homes and also complete a battery of questionnaire measures.

Infant and toddler parent report trial

We are seeking partners to work with us by providing pre- and post-group parent report data on the Infant and Toddler programmes. Group leaders will receive one complete pack of weekly leader files with all handouts checklists etc for the sessions and pre- and post-course research measures to administer to parents. They will be invited to

attend regular supervision and also receive a report analysing and giving feedback on the pre- and post-course measures.

Recruitment

Participating services, with assistance from their local health visitors, will be responsible for the recruitment of the 12 - 18 families in their area, participating families will then be randomly allocated by a member of the research team not involved in the data collection. A meeting will be held June 30th, 2008 for services participating in the main evaluation to develop a strategy for recruitment.

Research group leaders will be invited to attend a set up day on September 3rd, 2008, and programme delivery will commence September 8th, 2008. All groups in North Wales will be required to start at the same time to enable group leaders to access as many supervision dates as possible, and allowing for half term all groups should be finished by the 5th or 12th of December, 2008. A detailed timetable of group delivery, training and set up days is attached.

Training to deliver the programmes

The Welsh Assembly Government are providing all Children and Young Peoples partnerships in north Wales with a copy of the Incredible Years Infant and Toddler programme in addition to free training for two members of staff to deliver the programme. This training is open to people who have completed basic leader training and ideally have prior experience of delivering the basic programme.

Services interested in providing the research team with before and after measures of their groups can access additional training days made available at a rate of £15 per person. Infant training sessions are to take place on June 18th and July 22nd, and the toddler training session will be held on July 23rd. Further details of these additional training places can be obtained through Dilys Williams, at the address below.

We hope you feel as enthusiastic as we do about this opportunity to take part in the first evaluation of the Infant and Toddler programme, and hope you will join us as research partners. If you would like more information or like to express your interest in participating in the trial please contact the centre at the address below and we will be happy to speak with you.

Thank you,

Yours sincerely

Professor Judy Hutchings

Incredible Years Cymru
Nantlle Building
Normal Site
Bangor University
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LL57 2PX

E-mail j.hutchings@bangor.ac.uk
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APPENDIX N

Ysgol Seicoleg
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Adeilad Nantlle
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E-bôst: j.hutchings@bangor.ac.uk
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Agreement to participate in the evaluation of the Toddler Parenting Programme

Please tick as appropriate

☐ I wish to participate in the randomised controlled trial

☐ I wish to participate in the self-administered evaluation trial by providing the research team with before and after measures only

☐ I wish to provide some before and after measures for the Infant (0-1 years) only, (Supervision for this programme may not be until the spring term).

Please provide the following information:

Name of manager: ----------

Position: ----------

Address: ----------

Telephone Number: ----------

Email: ----------

Group leader 1

Name: ----------

Position: ----------

Address: ----------

Telephone Number: ----------

Email: ----------

Group leader 2

Name: ----------

Position: ----------

Address: ----------

Telephone Number: ----------

Email: ----------

Point of Contact

Name: ----------

Position: ----------

Address: ----------

Telephone Number: ----------

Email: ----------

Resources provided by the research team:
The research team will provide all participating services with the materials required to run the groups, this will include a case containing leader files, all handouts and raffle prizes. All group leaders will have access to weekly supervision.

Resources provided by you:
Participating services will be required to fund the delivery of the programme including crèche facilities and adequate time for staff to run the groups and attend supervision.
You will need to locate the Incredible Years Infant and Toddler Programme that has been sent to your CYP or to purchase a set of the programme materials. The Welsh Assembly Government has provided these to every CYP in Wales.

Managers Signature: ----------

Managers Name: ----------

Thank you again for your support, and we very much look forward to working with you.

APPENDIX O

Information sheet 22/07/08
Version IV

Participant Information Sheet

Research Title: Evaluating the Incredible Years Toddler Parenting Programme.

Investigator: Nia Griffith (PhD Student)
Supervisors: Professor Judy Hutchings
Dr David Daley

We would like to invite you to take part in a research study. We would like you to take your time to read this participant information sheet. The sheet will tell you what the research is about, and what we would need you to do if you take part.

What is the purpose of this study?
The study will examine how helpful parents find the Incredible Years Toddler Parenting Programme. The programme runs for twelve weeks and is designed for parents of children ages 1-3 years. The main aim of the programme is to help parents to support their child's development in the early years.

Why have I been asked to take part?
You have been asked to take part because you are the parent of a child aged 1-3 years, and you live in a Flying Start area in Wales. The parenting programme has been designed specifically for your child's age. With your agreement, your health visitor has given your name to the project, because you have said that you would like the chance to attend a parenting group and to help us with our study.

What do I have to do?
If you take part you will be asked to attend a 12 session parenting group. Each session will last two hours, and will be run in your local area on a weekly basis. A member of a small research team will visit you on two or more occasions at your home. The number of home visits you have will depend on which group you are put into by the research team.

All groups will have a first visit from the research team. These visits will happen some time in August, or early September 2008. After this first set of visits are completed, everyone who is taking part in the study will be split into two groups. One group will go on the parenting course straight away. This group will be visited again six months later. In another six months they will have their final visit.

The second group will wait six months before attending a parenting group. Six months after their first set of home visits, they will be visited again at home by the research team. After this visit they will be offered a place on the parenting course. They will not be visited again by the research team.

For every three people who agree to take part in the study, two people will go on the parenting group straight away and one will wait six months.

During the home visits we will ask you to fill out five short questionnaires about you and your child. A trained researcher will carry out a developmental assessment with your child. This is the same assessment that your health visitor will be undertaking so with your permission, and to avoid children being assessed twice, we need your consent to share this information between the research team and your health visitor. You will also be observed for 30 minutes playing with your child. These sessions will be video taped. The videotapes will only be watched by members of the research team.

Every time the research team visit you they will explain to you in full what will happen during that visit. All instructions can be given in English and Welsh. Each visit will last about one hour and there will be two visits at each time point (every six months).

All the information you give us will be kept in our research office at Bangor University. The information will be kept in a way that it will not be possible to identify you or your child. When we write up the findings of this study we will write about the group as a whole, not individuals.
What are the possible benefits of taking part in this research study?
The benefit of taking part in this research study is the opportunity to attend a 12-week parenting course. The course has been designed to inform you of your child's developmental needs. The course will also give you the chance to share your experiences of parenting and give support to you and other parents.

What are the possible risks of taking part in this research study?
We have done everything we can to make sure that no harm will come to you or your child during the course of this study. All members of the research team have had thorough criminal checks. Researchers are experienced in using all measures, and are trained observers.

What are the procedures in place to ensure confidentiality?
To ensure confidentiality and data protection, the contact details and identity of participants will not be disclosed to anyone other the main research team. When we write up the findings we will only be reporting the information for the group as a whole. All information relating to you and your family i.e. consent forms and contact details will be kept in a locked filing cabinet in the Bangor University. Your data will be entered into the database using an identification number not your name.

Will I be paid for helping the research team?
For every set of home visits you will receive £25 as a thank you for your time and co-operation. This £25 will be paid at the first session of the parent group for those attending the first group and at the same time for the waiting list group. After that participants will be paid at the end of the second visit at each 6-month time-point.

What information will I get after the study?
After you have taken part in the study, you will be sent a short report. This report will explain what we expected to find when we started the study.

We will give you the names and contact details of the main researchers so that if you have any questions after the study has ended, you will know who to contact. The main researchers will be more than happy to answer any questions you have.

What will happen if I don't want to carry on with the study?
Taking in this research is entirely voluntary and you can stop taking part at any time without penalty. If you withdraw from the research part of the study you can still carry on with the parenting group. If you are unable to finish the parenting course we would still like you to remain part of the study. If you move from the area we still want you to continue to assist the researcher during her scheduled visits if you can.

If you withdraw from any part of this study it will not affect your access to other health and social care services or Flying Start services for you or your child.

If any child protection issues arise, or any other issues that require the research team to share information with other services, you will be informed and the relevant information will be passed to the appropriate authorities.

If you would still like to take part in this study then you will be given this information sheet to keep and be asked to sign a consent form.

If you have any queries about this research please contact Nia Griffith, Nantlle Building, Normal Site, Bangor University, Bangor, Gwynedd LL57 2PZ.

I can be contacted on this telephone number: 01248 382651. If I am unable to answer your call, you can leave a message and you will be called back as soon as possible.

Thank you. We look forward to working with you.

Yours sincerely

Nia Griffith

If have any complaints about this research, please contact the following people;

Bangor University School of Psychology
Professor Oliver Turnbull, Head of the School of Psychology, Bangor University, Bangor, Gwynedd, LL55 2DG.

North West Wales NHS Trust
Mr Martin Jones, Chief Executive, Ysbyty Gwynedd, Penrhosgarnedd, Bangor, Gwynedd, LL57 2PW.

APPENDIX P

Consent form 22/07/08

Version III

Consent Form

Child Study for Parents Attending the Incredible Years Toddler Parenting Programme.

I (name)_____ have read and understood the information sheet dated 22/07/08 Version IV for the above study and have had the opportunity to ask questions.

I agree to take part in this study and to provide information to the researcher for use in the study.

I understand that this consent form consents for my child and me to participate in the research study.

I understand that I can withdraw from the study at any time and that my withdrawal will not affect my access to any current or future health or Flying Start services.

Please tick as appropriate

☐ I consent to take part in the research study

☐ I consent to complete questionnaires

☐ I consent for my child and myself to be observed/video taped

☐ I consent for the research team to share the scores they get by measuring the developmental of my child, with my flying start health visitor.

☐ I consent to my Flying Start Health Visitor sharing the scores they get by measuring the developmental of my child, with the research team.

☐ I consent to my GP being told that my child and I are taking part in the study.

Signature of participant _____

Relationship to child _____

Name of child _____

Date _____

Name of researcher _____

Signature of researcher _____

Date _____

Researcher: Nia Griffith,

Address: Incredible Years Cymru, Nantle Building, Prifysgol Bangor, Gwynedd, LL572PZ

Email: psp494@bangor.ac.ukTelephone: 01248 382651