Improving the Quality of

Family Support:

An Intensive Parenting Programme:

Mellow Programme

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IMPROVING THE QUALITY OF FAMILY SUPPORT: AN INTENSIVE TRAININ PROGRAMME: MELLOW PARENTING

Introduction

Child Protection: Messages from Research (1995) has emphasised that families need to be approached in terms of their needs, so that even where assessment and action are required for child protection, the approach should aim to sustain partnership with parents and families. This particularly so because most children, even those who have been removed from their families for a period because of concerns about safety, now return to their families including at least one of their original parents. From the child's point of view, the crucial issue is the extent and manner in which parents meet their needs through their relationship with them and parenting. That the quality of parenting is crucial for child mental health and development is well established, and there is increasing evidence to support the view that what goes on in the early years can have a vital influence on later outcomes. There are well established continuities in parent child relationships from infancy and pre-school to school age, and in children's developmental and emotional/behavioural difficulties from pre-school to adolescence and adult life.

There are now a plethora of initiatives and programmes that aim to influence the parent/child relationship and parenting directly, or indirectly, for the benefit of the children. These range across volunteer parenting programmes to support families in the general population, through early community prevention programmes for child abuse and neglect, to more intensive approaches designed to bring about change in circumstances where there are much higher levels of need and concern about the child's development and/or safety. It is important to put the Mellow Parenting programme in the context of these various approaches. Mellow Parenting is focused on families with pre-school children where the children are either on the child protection register or the extent of nature of associated risk factors for child development gives significant concern that child protection might become an issue.

The Children Act 1989 and the Children Act (Scotland) 1995 provide an essential framework for Mellow Parenting. The principal of judicial non interference means that whether or not a court makes an order necessarily depends on whether change can be brought about in the quality of the parent/child relationship. It is the quality of care which determines the threshold criteria for judicial action: maltreatment, impairment or the likelihood of impairment. The related principle contained within the Acts is that children should be retained with their parents or current care-givers wherever possible. Underlying this principle are concerns about the impact of removing children from current care-givers, and doubts and the quality of substitute care. The issue of modifying child rearing, or the quality of care given to young children is therefore crucially important. The aims of Mellow Parenting to develop and evaluate an intensive parenting programme for families with high needs for support are very closely aligned with the conclusions of other research taken through the Department of Health and summarised in *Child Protection: Messages from Research (HMSO 1995).*

Findings from previous work by the project group also underpinned the Mellow Parenting approach. Research exploring the impact of maternal depression on two or three year old children demonstrated firstly, that the depressed mothers were more likely to have had a troubled relationship with their own mothers in childhood and unsatisfactory school experiences, and secondly that even when the mothers' depression lifted over a six month period, there was no necessary improvement in the state of the child or the parent/child relationships. The quality of the mothers' own relationship with their current partners was closely linked to their responsivity to the child while current stressors in the inner city environment where the study look place were strongly related to the mothers' mental state and in turn to her emotional availability to the child. Lack of emotional availability was linked to the extent of the children's observed emotional distress and long term measures of child development. This study, therefore, emphasised both the importance of the parent's own early childhood **and** current stressors and the need to consider different aspects of the parent/child relationship in relation to psychological outcomes in the child (Cox et al., 1987: Puckering et al., 1995). Subsequently the evaluation of the volunteer

befriending scheme Newpin (Cox et al., 1990; Cox et al., 1991; Cox et al., 1992) demonstrated that, although well-engaged mothers' mental states almost invariably improved, this was certainly not always true of the parent/child relationship. This scheme had worked closely with groups of mothers where parenting was a serious concern, in exploring their own backgrounds and current circumstances but did little in the way of direct work on the parent/child interaction during the period of the research study. This research demonstrated that improvements in parent/child relationships were not a necessary consequence of improvement in parental mental state or measures of personal change. Clearly direct work on the parent child relationship was needed.

Child Abuse Prevention, Intervention and Parenting Programmes: Putting Mellow Parenting in Context

For any community it is useful to understand where different parenting programmes fit into the spectrum of services addressing different levels of children's need. To this end, consideration of the aims and characteristics of programmes is important. Programmes to prevent child abuse and neglect or intervene where child protection issues or actual abuse has already arisen from population-wide home visiting programmes to intensive programmes with groups or individuals. Even where the aim is primarily to prevent child abuse and neglect, it can be argued that there is an implicit if not an explicit intention to improve parenting and parent/child relationships. Programmes to promote good parenting or assist individuals in the general population with the task of child rearing have a more explicitly promotional aim with regard to child development but have at least some individuals and families who approach them with higher levels of need. Because emotional abuse is such a common accompaniment of neglect and physical and sexual abuse, and indeed may be the most important determinate of long term outcome if the child does not have a permanent disability resulting from physical disability, the dividing line between traditional categorisations of primary, secondary and tertiary prevention may be less useful than the understanding of children's different types and levels of need (Cox, 1997).

The target of preventional promotion programmes may vary from very high risk groups through clinical groups to general populations that are either disadvantaged or not. Although there is evidence that at least some general population home visiting programmes for the prevention of child abuse and neglect are effective in preventing physical abuse and/or improving parenting if these start sufficiently early, i.e. in pregnancy or very soon postnatally, and persist sufficiently long (McMillan et al, 1995 a and b), there is also clear evidence that they need to be tailored according to the level of need of the families concerned (Cox, 1998). Families with very high levels of need are not successfully supported by volunteers or primary care workers with additional training. Very intensive programmes with selected high risk groups have been successful (Schweinhart, Lawrence and Werkart, 1997; Cox, 1998) although problems with sustained involvement are also reported (Bernard, 1996).

Access or recruitment to prevention programmes to some extent reflect the levels of need, so that professional referral to specialist services may be involved for groups at high risk for adverse child development, while services available to total populations such as primary health care or volunteer services may work with families with somewhat lower levels or risks; voluntary projects with access by self referral may be taken up by families with even lower levels of risk factors for child development. Unfortunately these modes of access and recruitment are far from perfect. Professional referral to intensive services depends on effective screening and detection and there is good evidence that this is not entirely satisfactory with a danger of many who do not need particularly intensive services being referred to such specialised programmes while some who do need them are not recognised (Brown, 1995). Where general population programmes are concerned, there may not be the flexibility or level of training or expertise to respond to the widely varying levels of need. Those referring themselves to voluntary projects may have requirements that go beyond what such a project might expect to encompass.

a) The Focus: Mellow Parenting

In this context, the Mellow Parenting programme aims to meet a high level of need: families with a child under five with a child on the Child Protection Register and/or the presence of risk factors indicating a level of need not likely to be met by primary care services or routine outpatient services deployed by specialist Child and Adolescent Mental Health Services. (See Appendix 1 for criteria.) The program aims to work within and enhance existing services and research data has been collected in two different contexts, namely, Local Authority Family Centres and the outpatient service of a hospital based specialist Child and Adolescent Mental Health Service.

At all levels of need both group and individual programmes have been tried. The theoretical advantages of group programmes are those of economy, the group as a powerful agent in change and the support and added experience that parents and children gain from contact with other families in a group programme. Because Mellow Parenting makes explicit links between parents' own agendas and childhoods and the actual parent child relationship, an intensive programme such as Mellow Parenting aims to engage in a variety of modes of therapeutic working with regard to the family members involved. Mellow Parenting was deliberately structures so that there were a variety of contexts: Parents sometimes talking together in a personal group and sometimes interacting directly with their children alongside other parents doing the same. Groups were of two main types: one employed focussed discussion on personal issues past and present, while the other used video tapes of parent-child interaction, particularly those of participating families which could be filmed at home or during the Mellow Parenting programme. There was also direct work with the children as a group in parallel with parent groups. During the evaluation, the fathers were not directly incorporated in the group programme but some family or couple meetings incurred alongside the programme. Groups for fathers and couples are now run in association with Mellow Parenting in some Family Centres.

There is evidence that community-based prevention programmes for child abuse and neglect are more effective when they start in pregnancy or soon after (McMillan et al, 1995a). Although high

levels of need may be detected early, families do not become engaged with professional intervention until the second year of life or later. Because of an overall preventative intention and the relative accessibility of direct work on parent/child relationships in the pre-school period, the Mellow Parenting programme focused on children under five years. Work with families where the child was less than one year old was possible and desirable but in practice virtually all index children were aged between two and five years of age.

While it is apparent from what has been said that more highly trained staff are needed to deal with higher levels of need, there is evidence of at least some degree of effectiveness of schemes using volunteers such as Homestart and Newpin (Cox, 1983). Home visiting is a feature of both these schemes with centre based group work being a stronger feature of the Newpin project. Direct parent/child work has become a feature of the Newpin scheme which has always aimed to do some work on mothers' own childhoods. These centres explicitly use more intensive approaches than those routinely employed by Homestart. Research showed that intensive training and supervision is required if schemes involving volunteers are to work successfully with very needy families. During evaluation, Mellow Parenting was implemented by trained specialist workers including Clinical Psychologists, Social Workers, nursing staff, nursery nurses, Occupational Therapists and Child Psychiatrists, but also (in Scotland) by some volunteer staff as co-workers. An interactive Mellow Parenting training is required both for child care professionals and volunteers as the method and theory underlying Mellow Parenting is not necessarily part of the formal training requirement of any of the professional groups.

The evidence from the early community prevention of child abuse and neglect initiatives was that those that were effective persisted for longer than six months and indeed the most effective schemes persisted for at least two years. The most effective schemes with groups with multiple risk factors for child development such as the *High Scope project* have been very persistent over time (Schweinhart et al., 1997). It remains as important empirical question as to what is required if the effects of earlier interventions are to have persisting effects. The active part of the Mellow

Parenting programme lasted only between three and four months. The mothers and children attended weekly for a full day but follow up work of various types was available where necessary. In the family centres this consisted of involvement in a variety of other supportive services available in the centres and in the community. In the hospital setting this commonly involved direct work with individual families with nursery placements for some of the children. Evaluation included assessment before and after involvement in the group programme and at one year follow-up.

b) The Mellow Parenting Model

Smith and Pugh (1995) suggested that it is possible broadly to discriminate amongst parenting programmes on the basis of those that aim to be *relationship-based* in the sense that they explicitly aim to build a working relationship between the professional or volunteer helper and the parent of children helped, and those adopting a *teaching style* intended to transmit specific parenting skills.

The relationship-based or teaching styles of conducting the programmes reflect underlying *models* or *philosophies*. The Webster Stratton approach uses video tapes to demonstrate approaches to the management of children with particular reference to obtaining compliance and dealing with aggression. It has an explicitly teaching style. Preliminary results from evaluations conducted in the UK suggest that this approach may have beneficial effects for up to sixty percent of clinically referred families but that additional work is necessary for the other families if parent-child relationships are to change. This is particularly so where parents have had more troubled childhoods (Hill, 1997).

Teaching approaches reflect social learning theory which underpins *behavioural management techniques*. Some understanding of *child development* may also be relevant in considering approaches at different ages. Recognition of the impact of *parents' own childhoods* on their

function as parents including its impact on *maternal bonding* and *child attachment* gives more explicit emphasis to the need for *emotional support* of parents by those conducting the programmes and the need for *exploration of emotional and relationship issues*. Again, the most intensive programmes will aim to incorporate all these features both concerned with *behavioural management* and *child development* and those concerned with *relationships and emotional support.* Some counselling approaches such as Parent Adviser Project (Davis et al., 1996) emphasise the importance of the relationship between the counsellor and the parent, usually the mother, but focus on more here and now *problem-solving* using client centred methods to enhance self esteem and competence. Exploration of antecedent dynamic issues would not expect to be part of this method which employs additional training for primary health care workers. This approach addresses a referred population but one at an intermediate level of need where child protection is not under consideration and there is a reasonable expectation that work with the parent alone may be adequate to improve family relationships and parenting without the need for direct parent/child work. Mellow Parenting incorporates features of all these models and approaches with most prominence being given to the promotion of the parent-child relationship.

The material and methods employed and their extent and range again give an indication of the intensity of programmes. For example, parental support without the addition of any specific additional methods is unlikely to be effective except for those with low levels of need, where, for example, there may be maternal depression related to the loss of a loved person in the family but without evidence at the time of the support that the parent/child relationship has permanently suffered. Such support is an important part of the Parent Adviser scheme but in the Mellow Parenting approach direct parent-child work on behavioural management and the parent-child relationship also plays a part so that combined with client centred approaches the mother is encouraged and empowered to think and act systematically on problems, including child behavioural problems. Therefore, this approach goes beyond simple parental support. As indicated, work with a mother alone is unlikely to be effective where there are more entrenched dysfunctional patterns of interaction between parents and children. It is here that direct work with

parents and children together is necessary and in the Mellow Parenting programme this is coupled with the use of video feedback. This allows for more detailed examination of parent/child interaction. However, a further indication of the more intensive nature of the programme was that this was used not just to increase awareness and encourage parents to think about how matters might be improved by focusing on successful approaches, but also to take opportunities to relate current parent-child interaction to parents' childhood experiences.

Summary

It will be seen that there are a number of questions that need to be asked about parenting programmes in deciding what might need to be available in a particular area. Some programmes duplicate others but many are aimed at different levels of need with the intention of being available to different families within the population. The needs of children and families will fluctuate over time so that it may be that a family that required a much more intensive approach at one period would be able to be satisfactorily supported by a much less intensive approach at other times. Although the Mellow Parenting programme is less intensive than those programmes where whole families are admitted to a residential facility, it is at the more intensive end of the spectrum of parenting programmes as reflected in sustained hours of exposure to active work during the period of the programme; the use of in depth work with parents together and various types of groups; direct work on interaction between parents and children; the use of methods to address antecedent and concurrent risk factors; and the use of direct techniques to shift dysfunctional patterns of parent/child interaction.

Method

Aims

The principal aim of the current research was the evaluation of the effectiveness of the Mellow Parenting Programme in a community setting, and in a child mental health setting. It was predicted that, compared with a control group experiencing equal disadvantage at the beginning

of the study and having access to all other appropriate health, education, social work and community services, the Mellow Parenting groups would show an improvement in maternal mental health, reported child behaviour, observed mother-child interaction and child development.

Design

The design was an index vs. control design, with measures taken before group entry, immediately post group at four to six months later, and at follow up point one year after the completion of the group. The tests were a stringent test of whether involvement offered any advantage over existing programmes in family centres, many of whom ran groups or programmes specifically aimed at improving and supporting parent-child interaction.

Sample

For the purposes of study, the following admission criteria were applied:

1. Parenting difficulties or relationship problems including child protection issues

or

2. Family violence

or

3. At least two of the following: child behaviour problems, mother mental health problems, difficulties with current family relationships or family of origin.

Referral to groups was dependent on the centre. In the mental health setting in London, a conventional medical route via a general practitioner or other primary or secondary health service provider was expected. Following a referral, a full medical “work up” was undertaken by a

multidisciplinary team, and the Mellow Parenting Programme offered to families with a child under five who met the research criteria.

In Scotland, the family centre referrals came via more diverse routes, although some were referred by child psychiatry and clinical psychology colleagues. Many were referred by health visitors, social workers, educational psychologists, nursery schools or were offered the programme having approached the family centre seeking child care of other assistance. As the programme became better known in a locality, some families would self-refer, or be advised by friends or family to try the programme because they had found it helpful.

Mellow Parenting Sites

The research data used in the present report was collected from the Mellow Parenting programme as it was implemented in four sites in Scotland. (Appendix 2 presents discussion of London data collection and programme conducted in a hospital child mental health service clinic. There were differences in recruitment and procedures, staffing or the programme and some aspects of the structure of the day for the groups conduced in the hospital setting.) Three of these were family centre, either funded by social work services, or joint social services and voluntary sector organisations (Aberlour Child Care Trust, Barnardos). The fourth site was a community centre in a former mining village in Fife. The family centres all offered a variety of services besides “Mellow Parenting” including day care for children under five, advice and counselling for families, art and cooking and discussion groups, parent and toddler groups, and in some cases after school or homework clubs for older children. The community centre also housed a parent and toddler group. It had a community café, as well as a variety of adult education groups, although there was no unified strategy among the various independent groups.

Contrast Groups

The contrast groups in Scotland were not an untreated control group, but were, themselves, using family centres not involved in Mellow Parenting. In one case, a centre began in Mellow Parenting

programme **after** members of the contrast cohort had taken part in the study. Each of the family centres was run by a voluntary sector children's charity (Aberlour Child Care Trust, One Parent Families Scotland, Save the Children) with joint funding from social services, or directly by social services.

A description of the three family centres and their programme follows.

Family Centre 1

- Run by Aberlour Child Care Trust. Staffed by nursery nurses and social workers
- Services offered:
    - Day care for under fives, with priority given to children with special needs or family stress.
    - Girls group and boys group for school age children
    - Art and cooking groups for parents
    - Discussion group – invited speakers/activities/discussions of "family" topics including women's health, pregnancy, child care etc.
    - Family counselling/case work

Family Centre 2

- Run by Social Services
- Staffed by nursery nurses and managers
- Services offered:
    - Day care for under fives, with priority given to children with special needs or family stress
    - Art and cooking groups
    - "My Child" programme using structured activities and workbooks to facilitate parents' knowledge and understanding of child development and their own child in particular

- Family counselling/case work

Family Centre 3

- Run by Save the Children
- Staffed by nursery nurses and social workers
- Day care for children under five with priority given to children with special needs or family stress
- Social and education groups for parents
- Case work and counselling

Family Centre 4

- Run by One Parent Families Scotland
- Staffed by nursery nurses and managers
- Day care for children under five with priority given to children with special needs or family stress
- Social and education groups for parents including Child Development and Parenting Course run by outside tutor from Edinburgh University
- Case work and counselling

MELLOW PARENTING: PROGRAMME

Mellow Parenting is a **group** programme. It consisted of four main elements; 1) group work for mothers, 2) video feedback and workshops on parenting, 3) "hands on" work with parents, children and staff together over lunch, joint activities and finger and singing games, and 4) homework which was set during the parenting workshop (either as a result of the parenting topic under discussion or the mother's individual focus for change) and was followed up the following week in the group. The structuring of the day was variable depending on the demands of the setting, but each site incorporated these elements during a weekly, day-long programme.

The programme was fourteen weeks in length, and lasted approximately 9:30am – 3:00pm, leaving parents free to drop older children at school and collect them at the end of the school day. For the personal group, the homework group and the parenting workshop, a crèche was available, while over lunch and joint activities mothers, children and staff were together. Staff and parents thus worked together continuously for five hours each week.

The families using Mellow Parenting were almost by definition lacking in social skills and had also had poor experiences of the school system. Low levels of literacy and difficulties in relating to other people influenced the choice of methods to use in the groups. In group sessions, structured methods facilitated the participation of reticent participants and curbed the excessive volubility of the more dominating members. The methods included the use of warm up exercises to put participants at ease, a scheme of simple worksheets, which were read aloud to pre-empt reading difficulties (see Appendix 2 for Mellow Parenting programme), minimal demands for writing, and a systematic turn taking in group discussions, with each group member being invited to share their contribution in turn, but being at liberty to "Pass." In practice, few group members chose this option. The worksheets from the personal group and the parenting workshop were gradually built into a file, which mothers valued highly, some choosing to share its contents with partners and others guarding it from partners as being too confidential. In the latter case they were encouraged to take a blank worksheet each week to share with their partners if they wished.

Personal Group

A list of topics covered is given in Appendix 3. These were not necessarily covered in a set order, except where the personal group topic was thematically paired with a parenting workshop. These are more than fourteen topics, since new worksheets were sometimes devised in response to particularly salient issues arising in the group.

At each stage, the opportunities were taken to make links between the experiences of different group members to build group cohesion, and between past experiences and current parenting tasks and difficulties.

Parenting Workshop

Used worksheets similar to the personal group in format, i.e. sample themes for discussion, with demands on literacy minimised. The regular turn taking method was used during the group to facilitate equal participation of all members. In addition, prepared video clips illustrating successful and unsuccessful parenting strategies were shown.

After the first two weeks, group members showed their own parent-child interaction videotapes. Each mother viewed her own video with a staff member before the group showing and was encouraged to identify “things that went well” and “things that did not turn out the way you wanted them to.” Almost all mothers were quick to identify things that went wrong, but were reluctant, or indeed unable to give themselves credit for what they did well. Thus, the viewing of the videotaped interaction became a positive experience when staff deliberately sought opportunities to identify and praise good parenting strategies. The sharing of good experiences and problem solving around difficult parenting situations was a very good, cohesive experience for mothers, as well as a chance to learn from each other. Participants gained self-esteem and empowerment from the experience of contributing solutions to others, rather than being the net recipients of help at all stages.

Difficult interactions, including some child protection situations, were freely shared in an atmosphere free from blame, and appropriate strategies set in place where necessary to prevent further incidents, including between-group contacts with other group members, staff or other helping agencies.

Homework Group

In the early weeks, homework was set on a group basis following the parenting workshop topics. Thereafter, group members set their own targets and tasks, based round individual parenting challenges. At the first group sessions on the following week, progress on these tasks was regularly reviewed.

Lunchtime

Lunchtimes were an opportunity for mothers and children to spend some enjoyable time together, and practice new parenting skills in a "safe" environment. Following lunch, mothers and children joined in simple nursery songs and games, building up from low intensity circle games like "The farmer wants a wife" to more intimate face-to-face games like "Round and round the garden." Lunchtime sessions were videotaped once all the mothers had shown their home videotapes. They were then reviewed in the parenting workshop.

A programme of arts and crafts and simple cooking was also offered, with parents encouraged to interact with their own children. Outings to the library, a picnic and a supermarket were also offered as opportunities to have fun, and also tackle challenging situations after some preparation and planning.

MELLOW PARENTING: RECRUITMENT AND REFERRAL

The Scottish sample was recruited by several different pathways according to the criteria previously listed. Families were referred directly by child clinical psychology or child psychiatry services, but also by health visitors, social workers, nursery school staff, educational psychologists etc. Some mothers were recruited to the groups when they approached the family centres seeking child day care, if family centre staff considered that relationship problems with the child were present. Some mothers referred themselves as the reputation of the group grew in the local community. In each case, the group was presented to the family as something they might choose to do, and elements of coercion were eschewed, including pressure by social

workers or the court to comply with the programme to “prove” good intentions toward the child in child protection cases. Such families were told that they would not be offered a place in the group unless they chose freely to join. If they chose not to join, it would be reported to the social work department that **no** place had been offered at this stage, thereby avoiding their being blamed. No parent who wanted a place in a group was refused.

A clear statement of the nature and elements of the group was given both verbally and in writing (see Appendix 4). Only when a mother expressed a wish to join a group were some basic details taken of her mental state, marital relationship and relationship with her own parents and with her children. The mother was asked to define a goal for herself in the group, and also for her child(ren). Before the group began, the family were videotaped together at a mealtime and the video given to the mother. The group leader did not have a copy of the tape, although during the research project the research associates kept a copy of the video for baseline measures. The “ownership” of the video was clearly located with the family, again reinforcing the notion of choice.

In general, about 70% of the mothers approached agreed to participate in a group. Of these, one or two might fail to attend the first session of the group, or fail to attend more than one session. After that phase, very few mothers dropped out of groups, or failed to attend sessions. Eighty percent of families attended more than 80% of possible sessions. This high rate of compliance was probably a result of the “opt-in” recruitment method, and the clear philosophy of this being a group for the mothers which was there to facilitate the changes they wanted to make rather than a prescription which the service defined as therapeutic for them. It also reflects Mellow Parenting’s efforts in making the day an enjoyable experience that parents want to return to, notwithstanding the difficult and painful experiences they find in the group. Once a parent had indicated a wish to join a programme, however, strenuous efforts were made to facilitate her attendance, e.g. crèche support, transport, delivering worksheets if mothers missed group or telephone calls to make contact or offer assistance as necessary.

EVALUATION METHODS

After an initial home interview with Mellow Parenting staff to assess the family's wish to participate, pre-programme research assessments were made which included a semi-structured family interview in the home, followed at a later date by two mealtime videotapes of the mother and child at home in the family setting, and standardised developmental assessment of the index child (the child in the family causing most difficulties to the mother). In addition, within the first two weeks of the Mellow Parenting programme beginning, an assessment of the main carer's attitudes and expectations around parenting was done using a personal grid (Billinge, 1992). All measures were repeated immediately post group and after a further one year. Parents were also asked to complete a rating scale of how frequently they experienced "hassles" with the child in the average day and how difficult they found it to deal with these. The interview schedule was developed from that used in previous studies the Research Team have carried out. The assessments of parents' mental health and marriage employ methods developed and reported by Quinton et al, 1976 and Quinton and Rutter, 1985; child emotional and behavioural status used methods derived from Richman's questionnaire (1971, 1982). The Parental Hassle Scale is taken from Crnic (1990). Developmental measures (WPPSI, for children over three years, and Vineland Social Maturity Scale) were taken on the child at programme and follow-up phases. The mothers' IQ was estimated from short form of the WAIS.

Initial interview covered demographic data including household composition, some aspects of early parental experience, the child's emotional and behavioural status, mental health of the mother and her partner and the quality of their relationship, including ability to confide and an assessment of professional and non-professional support. Post treatment interviews covered similar ground, as well as including a record of major intervening life events, current strain from environmental sources and help offered and used outside of the Mellow Parenting programme.

MELLOW PARENTING OBSERVATION CODING SYSTEM

A crucial assessment was to evaluate change in the relationship between parent and child was from home videotapes were scored blind to index and contrast group status and pre- post of training. The videotapes were taken before a family joined the Mellow Parenting Programme, immediately after it ended (about a four-month gap) and one year later. Data on a contrast group of families was taken in the same way. Filming was done on these three data points during two mealtimes, with families being asked to carry on as they normally would so that spontaneous behaviour could be sampled in a natural context. The observation period depended on the length of each mealtime and varied between 15 to 30 minutes. A detailed home observation system, the Mellow Parenting Coding Systems (MPCS) (Appendix 5) was used to analyse the quality of parent child interaction based on concepts that have been found important for the psychological well-being and development of pre-school children. These concepts are derived from clinical experience and our previous research findings (Cox et al, 1987; Cox et al, 1992) which used observational methods in the home.

The six parenting dimensions of the Mellow Parenting Coding System (Mills and Puckering, 1994) are derived by scoring material taken from the home videotapes. For each dimension, behavioural interactions are scored on the basis of short sequences of naturally occurring parent-child interactions (mini-sequences). This allows a fine-grain analysis of both positive and negative aspects of parent-child interaction. Data recording is selective. Every sequence is activated by the occurrence of a pre-defined parent or child behaviour specific to each dimension. (These are defined and their usage documented in the extensive MPCS manual, see Appendix 6 for sample sheets). To reflect the complexities of social interaction, mini sequences specific to different dimensions can be coded simultaneously, as they overlap or sequentially. Actions can be coded on more than one dimension simultaneously and be accompanied by positive or negative affect as appropriate. Inconsistencies between parent and child affect (e.g. laughing at child's distress) or between parental action and affect were noted, however.

In operationalising the parenting concepts contained in each dimension, cognisance is given to the intentions of the parent: what their agenda is judged to be at the time, the pragmatics and context of the situation and the affective quality that characterises the social interchanges. An allowance for the child's age and developmental stage is built into the coding system. The parenting dimensions are: 1) **Anticipation**: *Positive:* a parent can be seen to prepare the child for changes in activity or caretaking by facilitating a known routine, giving prior warning, providing information or distracting the child so that the parent's agenda is easier to achieve and accomplished with the least possible friction between the dyad. *Negative:* failure to set up an appropriate situation which is then blamed on the child, e.g. making a mess with food if not appropriately seated. (n.b. if the parent does not abject to the mess, negative anticipation is not scored.) 2) **Autonomy**: *Positive:* the parent is seen to show an awareness of the child's individuality. The child is allowed to exercise choice, to behave spontaneously while the parent monitors ongoing activity, to receive encouragement and help when trying things out, to protest or complain or at least have the feelings and needs acknowledged. *Negative:* mother responds negatively to child protest or dismisses their feelings. 3) **Responsivity and Warmth**: *Positive:* parent and child are seen to have fun together and to share each others' focus of interest – a process called "meshing". Displays of mutually positive, or discordant, or negative effect – such as criticism or hostility and rough treatment are also noted. 4) **Co-operation**: *Positive:* the parent and child are each compliant to the other or the parent finds a positive way to gain the child's co-operation. *Negative:* threatening or coercive tactics are used to extract co-operation. 5) **Distress**: *Positive:* comfort and support is offered to a crying child who is upset, hurt or miserable. The number and length of distress sequences is noted. *Negative:* hostile or unsupportive responses to child distress. 6) **Control and Conflict**: interaction begins with a non-compliant, oppositional or prohibited child behaviour. Issues are judged as legitimate and appropriate for a parent to pursue, and whether they are handled effectively and without escalating tension in achieving the child's compliance. 7) One further interactive code was recorded during all six tapes of mini-sequence which described parental insensitivity or inappropriate responses or interventions that could be characterised as poor timing during an

exchange, emotional inconsistency or inattentive to the child's developmental status. All of the above codes are noted throughout the observation on a counted incidence basis.

In addition to the frequencies and rates obtained for mini sequences of interactive behaviour between parent and child at the three data collection points, some more global descriptions of joint behaviour are recorded every ten seconds. These included the degree of physical proximity, the level of attentional involvement during caretaking tasks and the type of social activity.

The coding manual (Mills and Puckering, 1994) was used for pre-defined coding categories which each reflected a different dimension of parenting. Four independent researchers coded the video tapes and were blind to all other information about the families and coded a parent-child dyad at only one data point. They had no information as to whether the tape was taken pre-or post-treatment. Satisfactory levels of reliability (over 80%) were achieved between the four coders with the exception of one dimension (warmth) where a transformation was applied for one coder's personal style, after extensive analysis of reliability data.

The structural coherence of the coding system was examined by Factor analysis since the parenting dimensions were not empirically driven but derived from theoretical and clinical concepts informed by research measures previously employed. Pre-programme data for the Scottish sample of 54 index and 28 controls produced three factors which accounted for 60% of the variance (Table 1). Factor one was characterised by mainly negative and control factors while factor two carried positive autonomy, warmth, anticipation and co-operation. Since these two axes are independent, a positive and negative coding score for each dimension for each parent and child is justified. Negative parenting, as we had surmised, is not the opposite of positive and high rates of positive and negative behaviour can co-exist in a single dyad. A third factor featured aspects of negative autonomy and anticipation in the context of distress.

There are therefore, 12 observation measures for mini sequences, one positive and one negative for each dimension. In addition, there is a frequency measure of good involvement between parent and child and a frequency measure for inappropriate parental response in intervention. Since no attempt was made to standardise the length of mealtimes, a rate measure was used for all observational measures.

Table 1

Observational Variables (Scotland, Pre-group)

Factor Analysis

Factor 1 36% of variance	**Factor 2** 12% of variance	**Factor 3** 11% of variance
Negative co-operation	Positive anticipation	Negative anticipation
Negative responsivity	Positive autonomy	Negative autonomy
Negative distress	Positive co-operation	Distress
Amount, time and negative control	Positive responsivity	

THE SAMPLE

Table 2 Description of the Sample Characteristics Pre-group

Scottish Sample	Index	Control
No. subjects interviewed	69	29
No. of subjects engaged in programme and with complete data	54	28

It can be seen from Table 3 that the families taking part in this study have a great deal of early and current adversity in their histories. There is often a history of caretaking disruption, emotional deprivation and harm in their families of origin; their current relationships reflect either isolation or problematic support often with a history of violence. In addition, their current environmental stresses are problematic for satisfactory child rearing. On the following characteristics there were significant differences between the index and control families with the former systematically showing most disadvantage: impaired maternal mental health, quality of cohabiting relationship, past and current domestic violence and child behaviour problems.

Table 3. Characteristics of the Families in the Mellow Parenting Project and Controls (Scottish Sample). Means and Standard Deviations.

	Index n = 54	**Control n = 28**
Age of Mother: Mean	27	26
(sd)	(6)	(5)
Age of Child in Months: Mean	39	36
(sd) (see histogram)	(12)	(12)
Sex of Child: girl	16	11
boy	38	17
Cohabiting status of mother		
Living alone	16	9
Non-cohabiting relationship	9	2
Cohabiting	29	17
Chi Square = 1.62 ns		
No. of areas of current environmental strain (debt, housing problems, neighbourhood threat, lack of play space)		
0/1	35	22
2/4	19	6
Chi Square = 2.35 ns		
EARLY EXPERIENCE OF MOTHER		
No. of major changes of caretaker before age 12		
0	34	17
1/2	15	9
2+	5	2
Chi Square = 4.77 ns		
Placement in care or fostering		
0	31	14

1	9	11
1+	10	3
Chi Square = 5.10 ns		
Experience of harsh discipline and/or definite injury in childhood By father:		
No	41	24
Yes	13	4
Chi Square = 1.08 ns		
By mother:		
No	41	24
Yes	13	4
Chi Square = 1.08 ns		
Number of indifferent or hostile major caretakers in childhood (Including foster or step parents if relevant)		
0	14	11
1	9	10
2	20	7
3	1	0
Chi Square = 3.86 ns		
Physical abuse		
No	38	25
Yes	15	3
Chi Square = 3.28, p = 0.07		
Sexual abuse		
No	41	26
Yes	13	2
Chi Square = 3.54, p = 0.06		
CURRENT MARITAL AND SOCIAL RELATIONSHIPS OF MOTHER		
Mother's mental state in last three months (RDC – Mainly depression ± anxiety)		
Not impaired	22	21
Impaired	32	7
Chi Square = 8.86, p = 0.003		
Quality of cohabiting relationship		
None	16	10
Good	11	11

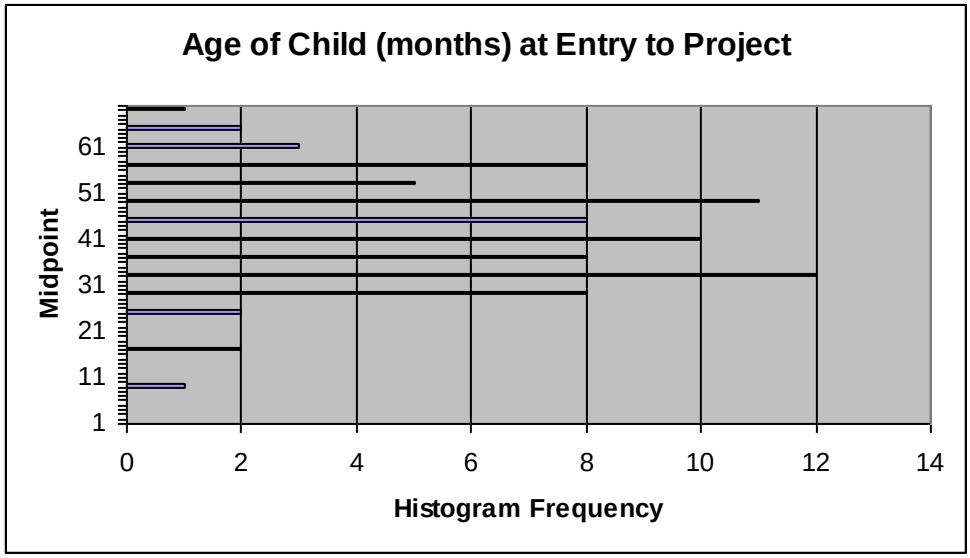
Poor	27	7	
Chi Square = 5.45, p = 0.065			
Mental state (mainly depression or anxiety) in partner			
None	29	15	
Psychiatric disorder	9	4	
Chi Square = 0.5, p = 0.82			
Personality disorder in partner			
None	29	15	
Serious	9	4	
Chi Square = 0.5, p = 0.82			
Discord in cohabiting relationship			
None	14	11	
Serious	25	7	
Chi Square = 3.18, p = 0.07			
Physical violence from partner			
No partner	16	9	
No violence	28	18	
Occasional violence	4	1	} Collapsed for Chi square
Severe violence	4	0	
Current severe and past violence	2	0	
Chi Square = 3.60, p = 0.06			
Confiding friends			
None/dubious	19	8	
Definite	35	20	
Chi Square = 0.37, p = 0.54			
CHILD CHARACTERISTICS			
No. of areas of emotional or behavioural problems (Richman Scale)			
0-2	0	4	
3+	54	24	
Range	3-14	0-11	
Median	9	5	
Chi Square = 8.11, p = 0.004			
Injury to child by mother pre group (as reported by mother)			
None	40	24	

Definite	12	4
Chi Square = 0.87, p = 0.35		

As can be seen from Figure 1, the range of children's ages was from 9 to 70 months, with the majority of children between 33 and 60 months.

Figure 1

Age of Child (months) at entry to a project



Analysis of Change

The outcome of the effectiveness of the programme could be expected to be seen in the areas of maternal mental health, mother's report of personal changes, child behaviour problems, the observational interaction variables, mothers' report of the frequency and intensity of daily hassles and in child development measures. Each measure, except child developmental measures was taken at pre-group, post group and follow up time points. It is, however, pertinent to consider change during the group and the maintenance of change in the subsequent year as rather different issues. All participants in the index group had a similar exposure to Mellow Parenting, but widely divergent experiences both in terms of subsequent life events and availability of support after the group.

For clarity and brevity, all measures will be reported at pre-group and post group time points along with follow up, but these will be discussed separately, along with a more focused analysis (using discriminant function analysis) of which initial factors best define the group most likely to benefit from their experience of Mellow Parenting, and which subsequent experiences are most likely to maintain or undermine change.

Maternal Mental State

The severity of mothers' mental state at pre-group, post group and follow up time points is illustrated in Figure 2. The index group were significantly more depressed than controls before the course. However the changes in mental state between the groups were not significant in an analysis of variance, largely reflecting an increased variance at follow up in the index group, because of their greater diversity of outcome.

Given the non-normal distribution of the severity measure, a non-parametric analysis (Chi Square) of mothers who moved to or from a clinically significant level of mental health problems was made at pre- and post group time points.

Figure 2

Severity of Mothers' Mental State

0=no disorder; 1=some disorder, no impairment; 2=definite impairment in functioning 50% of time or more

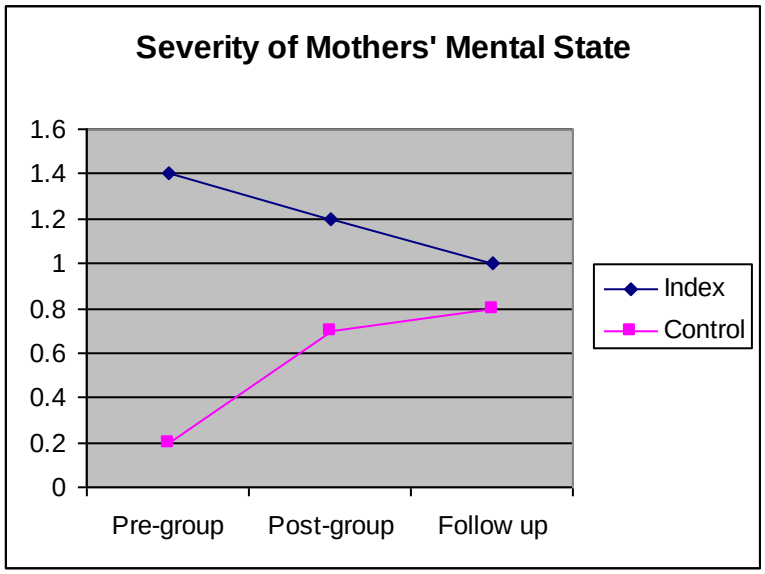


Table 4. Maternal mental state: change between pre- and post group status for index and control subjects

	Get Worse	Stay Bad	Get Better	Stay Good
Index	9	9	20	16
Control	2	2	5	18

Chi Square – 10.2, p = 0.02

A significantly greater proportion of the index group had mental health problems initially than the control group, but an equal proportion of them recovered by the end of the group (Table 4).

Child Behaviour Problems

The prevalence of child behaviour problems was initially significantly higher in the index group (mean 7.9, sd 5.5) than in the controls. This difference had shrunk at the post group measures,

and this change was maintained at one year follow up. (Figure 3) An analysis of variance of these figures showed significant interaction, that is, the index group improved more than the controls.

A stepwise multiple regression analysis within the index group showed that none of the mothers' reported past or current measures at the pre-group time point predicted initial child behaviour problems, but the number of control sequences between mother and child at the pre-group observation was significantly associated with child behaviour problems.

CHILD BEHAVIOUR PROBLEMS

Time

	Pre MP Group	Post MP Group	1 Year Later
Index	7.9	3.5	2.7
Control	5.5	3	2.9

Group x time P = <.001

Multiple regression analysis within the index group after the group showed that persisting child behaviour problems were predicted by mothers' own experience of a negative relationship with her father.

Using a categorical dichotomisation of number of areas of child behaviour problem less than or greater than three, 100% of the index group showed pre-group behaviour problems. This fell to 68% post group, and 55% by follow up.

Table 5 Child Behaviour Problems in girls and boys at pre-group, post group and follow-up time points, for index and control groups (Means and standard deviations)

	Index		Control	
	Boys	Girls	Boys	Girls
Pre-group	9.0 (2.5)	7.5 (2.9)	6.0 (3.0)	4.6 (2.5)
Post group	5.5 (2.9)	2.9 (2.3)	3.1 (2.0)	4.2 (2.3)
Follow up	4.9 (3.6)	1.9 (1.9)	3.5 (3.4)	4.2 (1.9)

As can be seen in Table 5 the index group boys and girls were significantly more troubled than control children by behaviour problems before the group. In the index group, behaviour problems fell at post group and follow-up time points. While this was also the case for control boys, it was not the case for girls. A repeated measures analysis of variance showed significant effects for gender of the child ($p=0.029$), index or control status ($p=0.05$), and time ($p<0.001$) as well as gender by time ($p=<0.001$), group by time ($p<0.001$), gender by group ($p=0.018$) and three way interaction (gender by time by group $p=0.03$).

Table 6. Rates and Positive and Negative Mother-Child Interaction for Index and Control Groups, Pre-group, Post Group and Follow Up

(Means and Standard Deviation)

		Pre-Group		Post Group		Follow Up		
		Index	Control	Index	Control	Index	Control	
Anticipation	Positive	.039(.03)	.034(.02)	.026(.03)	.018(.01)	.025(.02)	.021(.03)	N.S.
Autonomy	Positive	.140(.09)	.126(.06)	.134(.10)	.103(.06)	.107(.09)	.135(.14)	N.S.
	Negative	.007(.01)	.006(.14)	.008(.02)	.003(.01)	.004(.01)	.003(.01)	N.S.
Co-operation	Positive	.053(.04)	.066(.04)	.053(.04)	.034(.03)	.049(.04)	.030(304)	Group x Time F=3.32, p=0.04
	Negative	.034(.03)	.040(.07)	.025(.03)	.022(.04)	.015(.02)	.020(.03)	N.S.
Distress	Positive	.004(.011)	.006(.016)	.002(.007)	.001(.003)	.002(.008)	.000	Control x Time F=1.07, p=0.345
	Negative	.007(.017)	.004(.011)	.011(.047)	.001(.003)	.005(.015)	.000	Control x Time F=0.56, p=0.573
Warmth & Stimulation	Positive	.085(.10)	.105(.12)	.199(.14)	.114(.13)	.122(.09)	.057(.06)	Group x Time F=6.43, p=0.002
	Negative	.107(.10)	.085(.12)	.128(.16)	.148(.11)	.050(.07)	.112(.12)	Group x Time F=3.09, p=0.03
Inappropriate Response		0.19(.03)	.020(.03)	.013(.02)	.016(.01)	.009(.02)	.019(.02)	Group x Time F=2.97, p=0.06
Time in Control		1.52(1.4)	1.30(1.8)	1.39(1.8)	2.40(1.5)	1.00(1.4)	.50(.87)	Group x Time F= 5.56, p=0.005
Negativity in Control		.039(.04)	.018(.03)	.029(.04)	.052(.03)	.030(.06)	.016(.02)	Group x Time F=4.7, p=0.01
Time in Good Involvement		23.4(25)	20.7(26)	30.6(27)	20.8(22)	23.4(20)	10(11)	N.S.

CHILD BEHAVIOUR PROBLEMS

	Pre MP Group	Post MP Group	1 Year Later
Index	7.9	3.5	2.7
Control	5.5	3	2.9

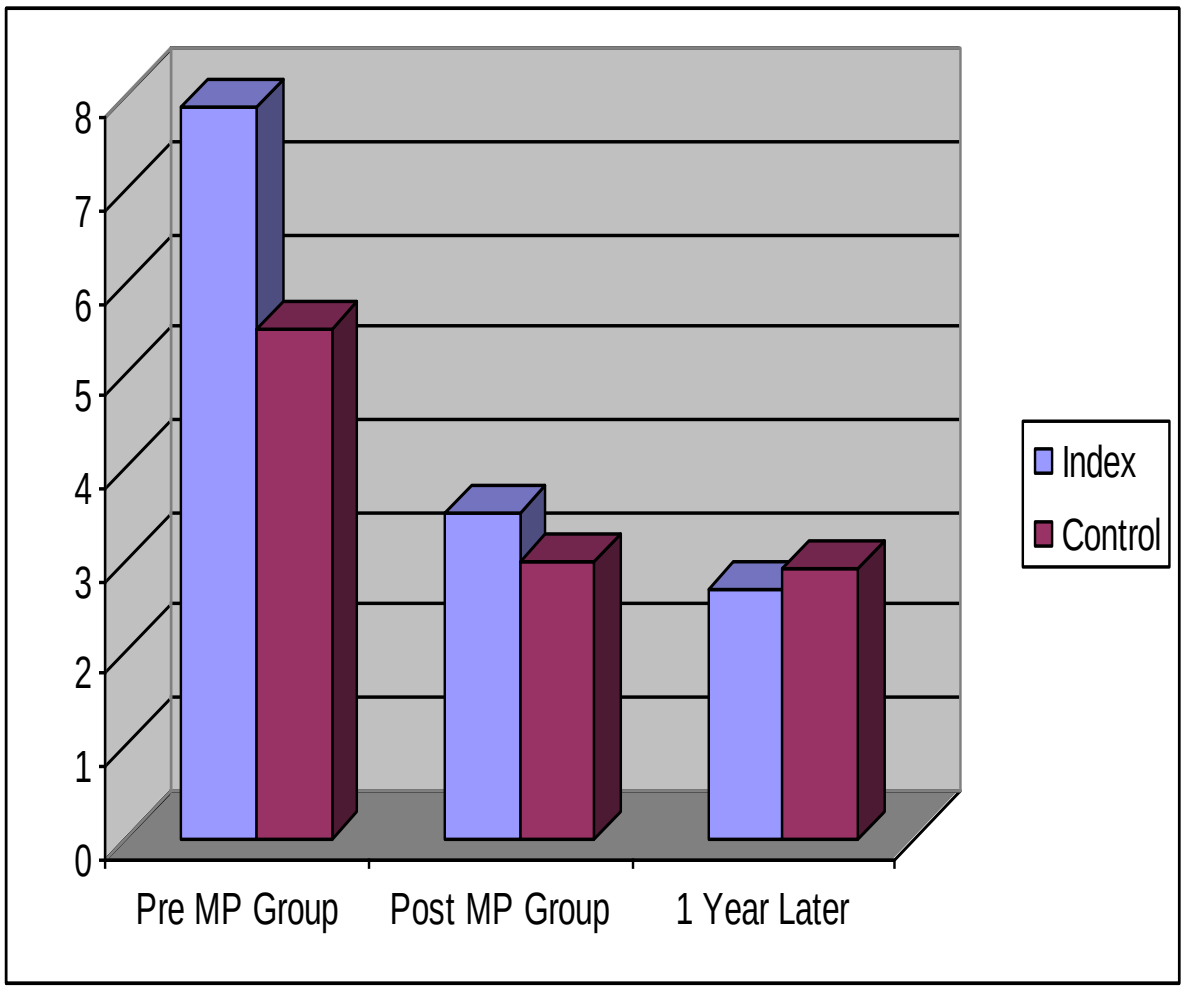


Figure 3

Rate of Warmth and Stimulation

	Pre MP Group	Post MP Group	1 Year Later
Index	0.085	0.199	0.122
Control	0.105	0.114	0.057

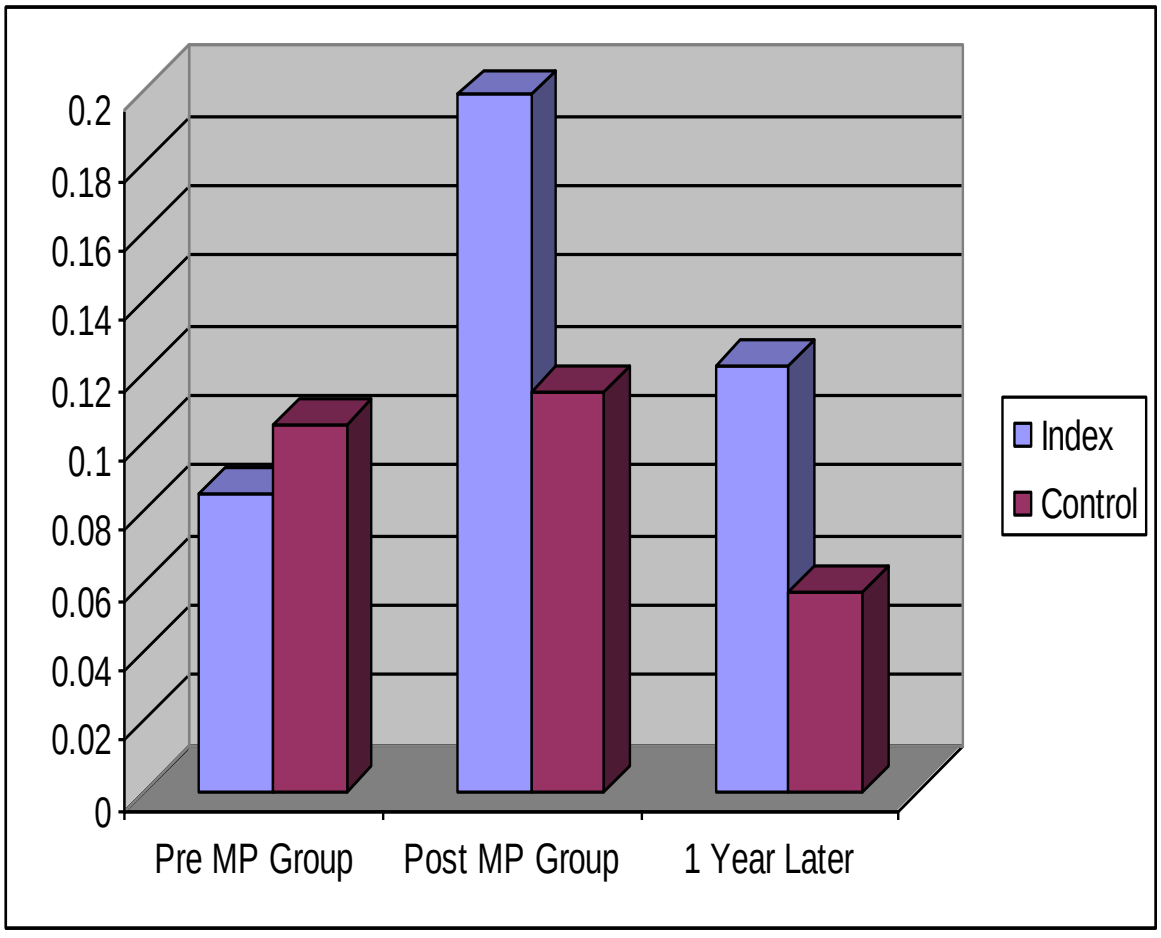


Figure 4

Rate of Negative Responsivity

	Pre MP Group	Post MP Group	1 Year Later
Index	0.107	0.128	0.05
Control	0.085	0.148	0.112

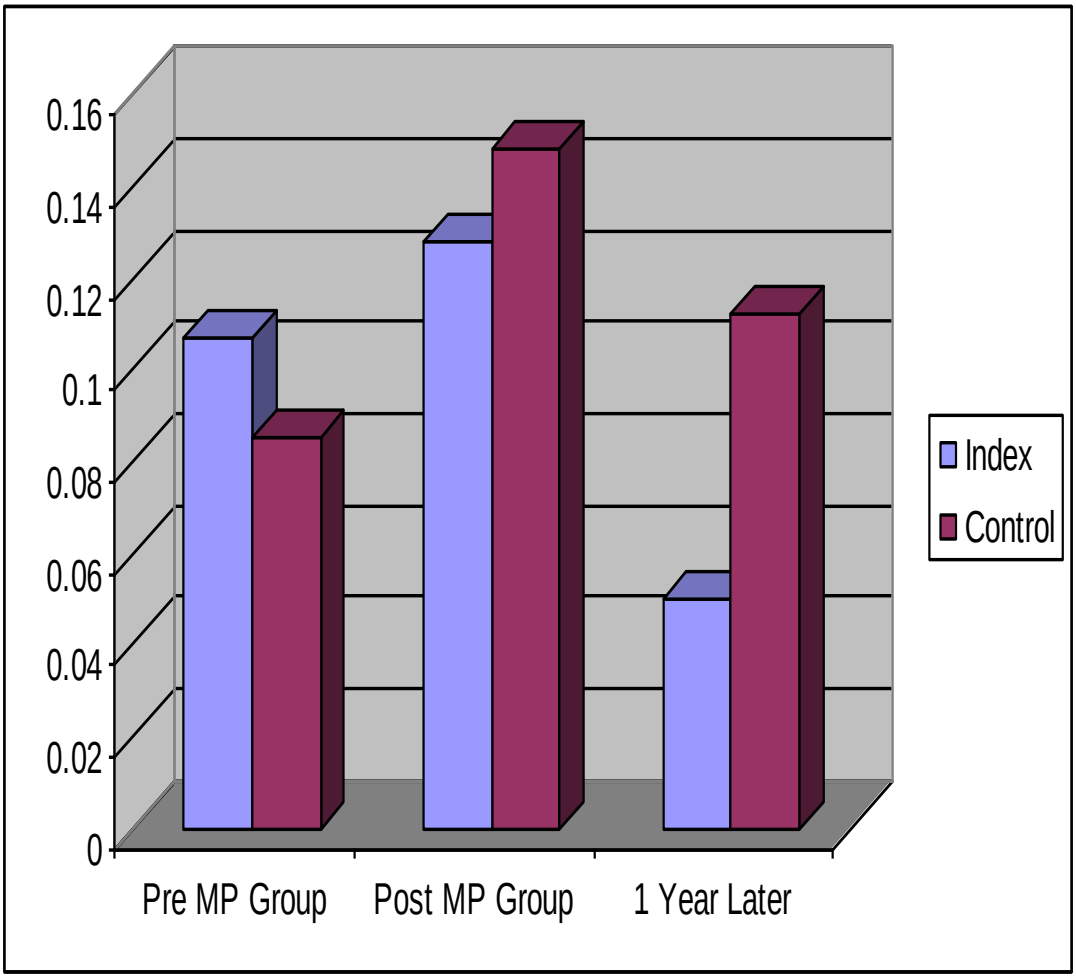


Figure 5

Rate of Positive Co-operation

	Pre MP Group	Post MP Group	1 Year Later
Index	0.053	0.053	0.049
Control	0.066	0.034	0.03

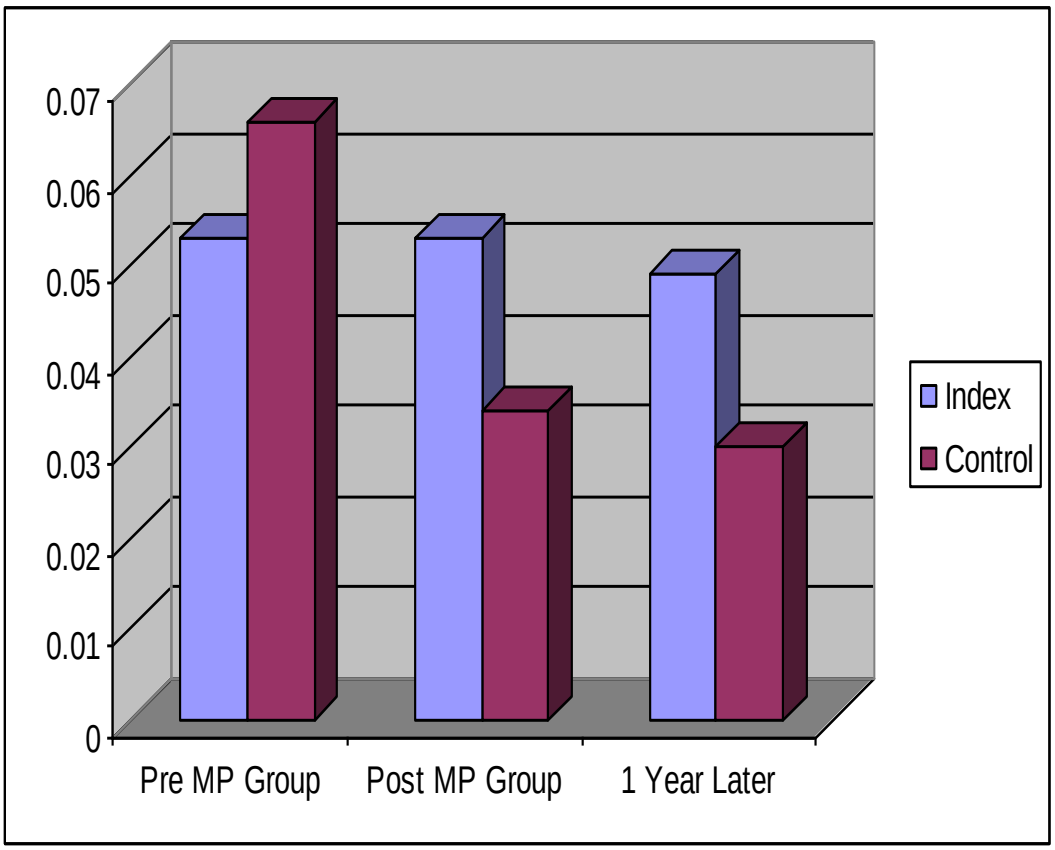


Figure 6

Rate of Inappropriate Parental Response

(Poor timing, emotional consistency, inappropriate developmental level)

	Pre MP Group	Post MP Group	1 Year Later
Index	0.019	0.013	0.008
Control	0.02	0.016	0.019

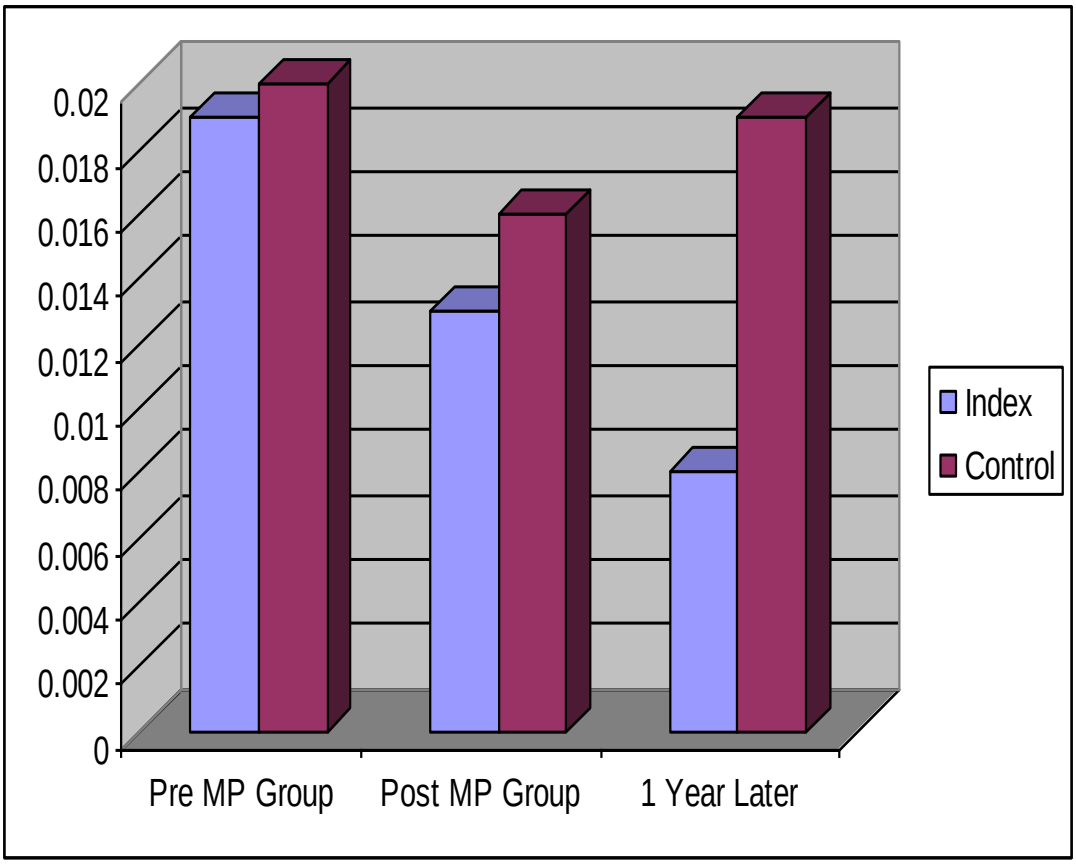


Figure 7

Rate of Negativity During Control

	Pre MP Group	Post MP Group	1 Year Later
Index	0.039	0.029	0.03
Control	0.018	0.052	0.016

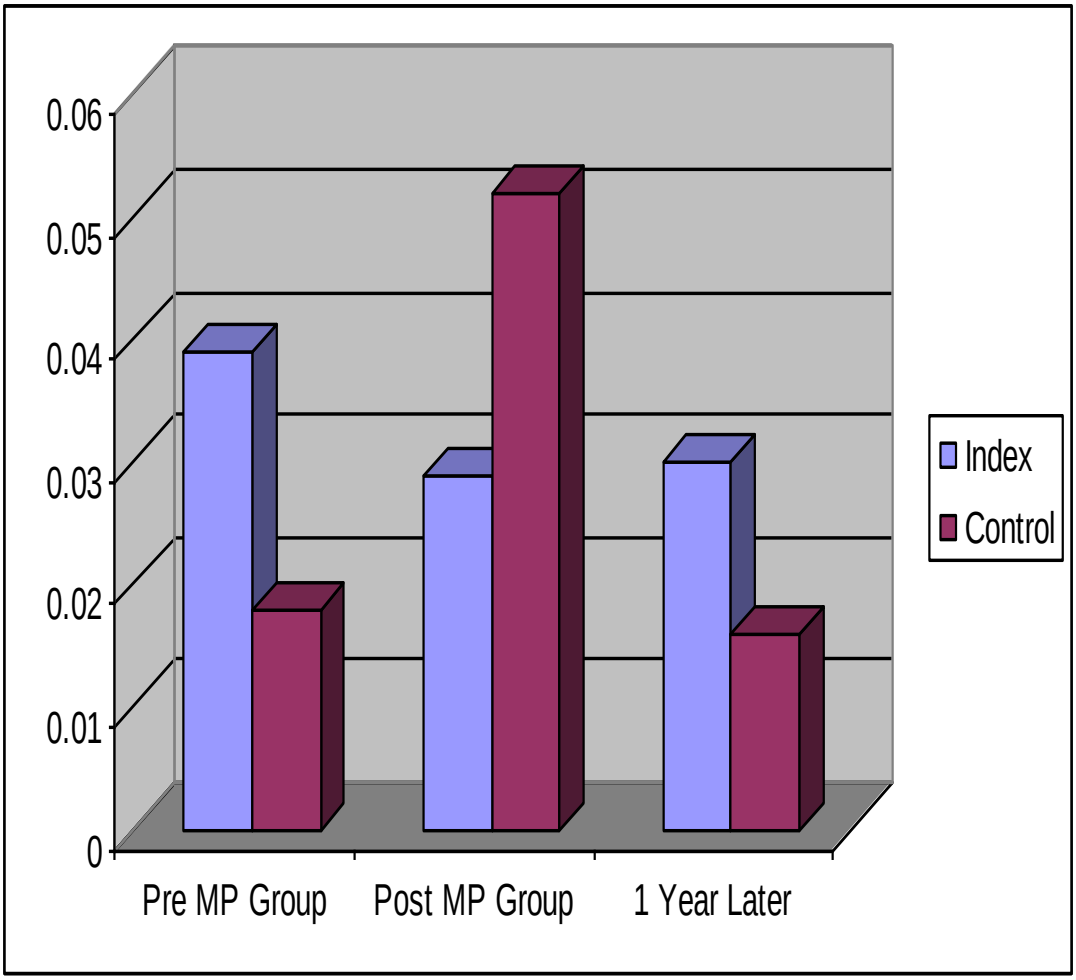


Figure 8

Time Spent in Control

	Pre MP Group	Post MP Group	1 Year Later
Index	1.52	1.39	1
Control	1.3	2.4	0.5

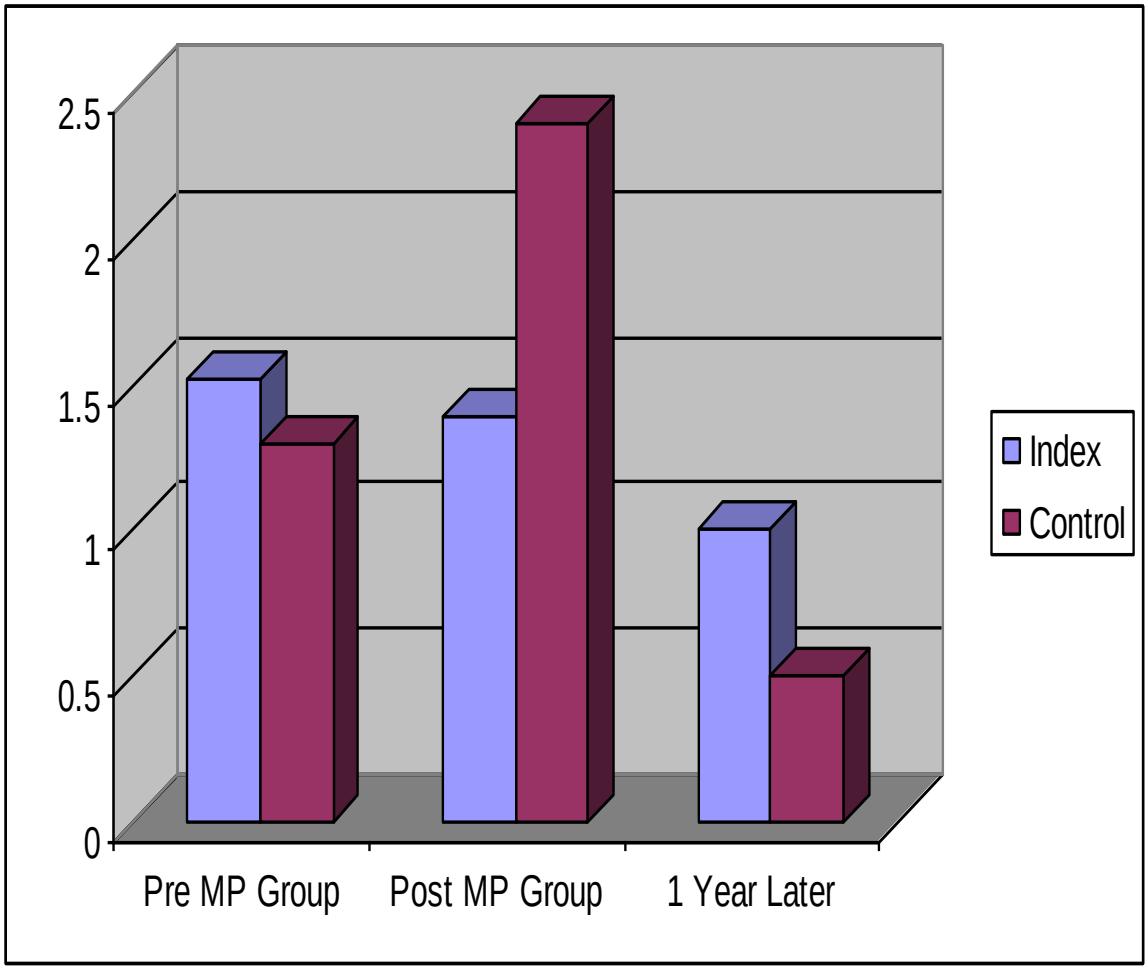


Figure 9

Time Spent in Good Involvement

	Pre MP Group	Post MP Group	1 Year Later
Index	23.4	30.6	23.4
Control	20.7	20.8	11

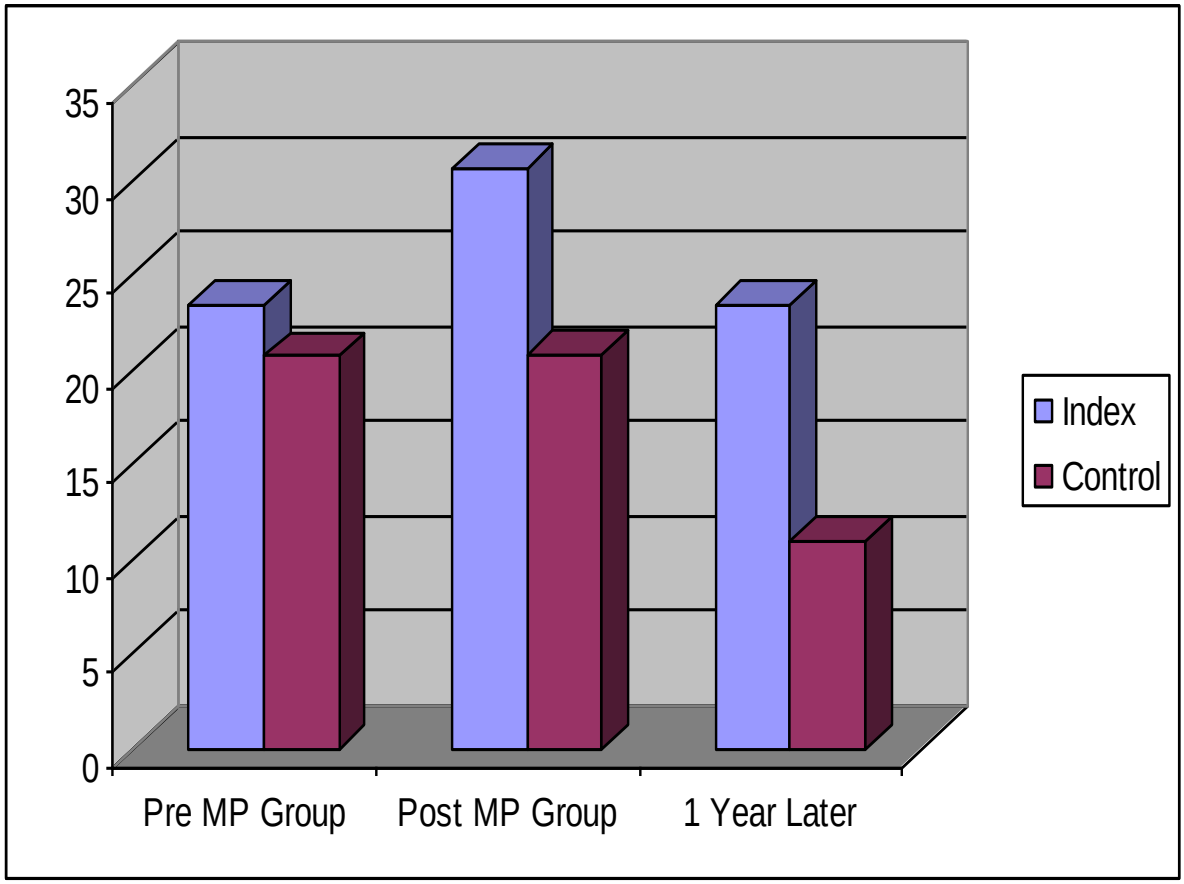


Figure 10

Analysis of the Observational Variables

Given the number and complexity of the observational variables in relation to the number of subjects, a conservative approach to the analysis of the data is essential. In addition, factors which improve during the programme, which is experienced relatively homogeneously by participants, may or may not be maintained during the follow up period when a variety of life events, strain and support may be experienced by participants independent of any family influences of the programme.

Table 6 reports the means and standard deviations of the interaction variables, expressed where appropriate as a rate using the length of the observation as a base.

Significantly, in the control group there is a systematic decline in all interaction measures, both positive and negative. This may reflect a developmental trend, with older children seeking and needing less intense parental care, but given the context of the observation, that is a family mealtime, it may also reflect a choice by the parent to disengage from the child. The fall off of time spent in a good involvement with the index child is particularly evident in the control group at one year follow-up. This decline is less marked in the index group.

Many of the most important observational measures which describe the different dimensions of parent-child interaction showed a different pattern of change for the index and the control dyads across the three data points of pre-, post and one year after intervention. On these interaction measures, index parent-child pairs improving over time or staying good significantly more than control couples. Analysis of variance revealed a significant group by time interaction of the following measures on rate: warmth and stimulation (F-6.43; p=0.002) (Figure 4); negative responsivity (F=3.09; p=0.032)(Figure 5); positive co-operation (F=3.32; p=0.042)(Figure 6); inappropriate parental response (F=2.97; p=0.050)(Figure 7); negativity during control (F=5.56;

p=0.010)(Figure 8). Time spent in control also differentiated index and control parent-child couples (F=5.56; p=0.010)(Figure 9). Time spent in good involvement, while not reaching significance showed a similar trend in favour of the index group (Figure 10). It should be noted that distress never occurred for about half the children in the study, perhaps because very few children were under two years of age when the study started. Distress measures were therefore of limited value in this cohort. Also, the dimension of anticipation did not reflect group differences – again because of the older ages of the research cohort. Autonomy, however, both positive and negative, would have been expected to reflect different patterns of change for the index and control group and it is surprising that this observation measure did not discriminate as effectively as the other dimensions of parenting are seen here to have done.

In order to summarise the data, and to avoid excessive numbers of individual analyses with the consequent chances of inflating significance levels, mothers were divided into four groups reflecting the status as better or worse than the control group trend for each variable. Mothers with negative changes on no more than two out of eleven variables between pre-and post group time points were classified as positive movers, and those with no more than two positive changes as negative movers. Those with between three and nine positive changes were classified as predominantly good or predominantly bad movers. The counts of these two categories are given in Table 7.

Table 7. Positive and Negative Change on Observation Measures for Index and Control Group between Pre- and Post Group Measures

	Positive Movers	Predominantly Positive	Predominantly Negative	Negative Movers
Index	27	8	13	6
Control	4	6	8	10

Chi Square = 12.6, p<0.006

A similar classification was made for change between post group and follow up measures (Table 8).

Table 8. Positive and Negative Change on Observation Measures for Index and Control Group between Post Group and Follow Up Measures

	Positive Movers	Predominantly Positive	Predominantly Negative	Negative Movers
Index	30	12	2	7
Control	9	3	9	4

Chi Square = 14.8, p=0.002

A third analysis looked at whether mothers moved categories between the pre- and post group analysis and the post group to follow up analysis. This allows the documentation of deterioration after initial improvement and also the possibility of ongoing improvement or "sleeper effects." (Table 9)

Table 9. Positive and Negative Change on Observation Measures for Index and Control Group between Pre- and Post Group and Follow-up Measures

	Positive Movers	Predominantly Positive	Predominantly Negative	Negative Movers
Index	30	12	2	7
Control	**9**	**3**	**9**	**4**

Chi Square = 11.53, p=0.009

Relationships of Pre-Group Measures to Positive Change

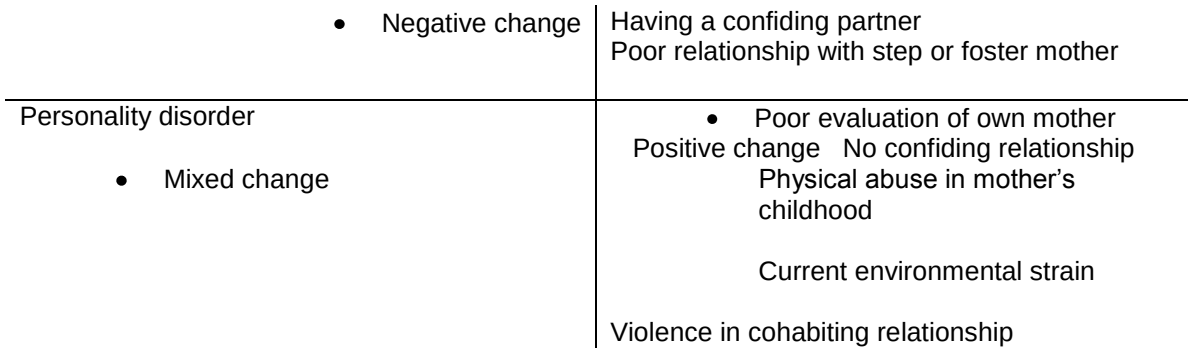
To ascertain the factors which could identify those most likely to experience benefit from involvement in the programme is a crucial task for this study, as the targeting of appropriate interventions is of key importance both from a health economics and clinical viewpoint.

To distinguish those mothers who do or do not make significant gains in the programme, a discriminant function analysis was used, with measures from the pre-group interview, which are most obviously accessible by fairly standard clinical interviews entered as the predictor variables and change between pre- and post group observational measures as the outcome. The results are tabulated in Table 10 with a two factor solution, separating positive movers, negative movers and mixed outcome distinguished, and plotted in Figure 11.

Table 10. Discriminant Function Analysis – Positive, Negative and Mixed Change in Parenting Post Group, Predicted by Current Stresses and Background Factors

	Function 1	**Function 2**
Positive Change	**3.2**	**2.9**
Mixed Change	**0.62**	**-1.2**
Negative Change	**-1.9**	**0.89**
	Poor evaluation of mother in child	Confiding partner
	Being in care as a child	Partner poor mental health
	Harsh maternal discipline as a child	Partner personality disorder
	Harsh paternal discipline as a child	Poor evaluation of mother in childhood
		Poor marital relationship

Figure 11. Discriminant Function Analysis – Positive, Negative or Mixed Change in Parenting Post Group and Associated Background Features.



A similar discriminant analysis was made between post group and follow up classifications, with life events and the use of helping resources between the end of the group and follow up included as predictors. The results are tabulated in Table 11, and plotted in Figure 12.

Table 11 Discriminant Function Analysis – Positive and Negative or Mixed Change in Parenting at Follow-up, predicted by stress, support and group experience

	Function 1	Function 2
Positive change	-0.49	-0.13
Mixed change	0.46	0.62
Negative change	1.31	-0.66
	Negative results of group (often hostility from partner)	Good mental state
	High continuing child problems	Daycare for child
	Good marriage / relationship	Little help with childcare
	High life events	Environmental strain

Table 12. Frequency of Pre-group Daily Hassles for Controls and Good, Mixed and Poor Outcome Groups, Pre- and Post Group and Follow Up (Means and Standard Deviations)

	Control	Index Negative Movers	Index Mixed Outcome	Index Positive Movers
Pre-group	43.5 (7.3)*	60.5 (15.9)	50.6 (9.3)	48.3 (14.2)
Post Group	46.1 (13.8)	48.9 (16.3)	45.7 (12.7)	39.3 (12.7)
Follow Up	46.2 (15.0)	51.2 (4.3)	47.5 (9.5)	42.8 (10.0)

***Difference between index and control significant, p = 0.002**

The index group show significantly more frequent difficulties in daily management with their children than do the control group, with particularly high rates of difficulty in the group who subsequently make predominantly poor progress in the group programme. At post group and follow up time periods, no significant differences remain. The poor outcome mothers are still

reporting slightly more problems than the other groups, but even for them, the hassles have dropped in frequency.

A similar analysis of the intensity of the Crnic scale, that is how annoying and frustrating the mothers find these daily management issues, shows a similar pattern of the results (Table 13). The index group overall are significantly more troubled by hassles initially, but this difference disappears by post group and follow up time points, with the index now being no worse than the controls. There is also an interaction with outcome status, with the positive change group showing less intensity of frustration on the child management issues. Their lives are still far from hassle free with their children but they seem more resilient and less disturbed in how they now experience such everyday hassles. The hassle scale is a helpful external validity indication that the classification of the change mothers made on observation is reflected by how stressed the mothers feel by childcare.

Table 13. Intensity of Pre-group Daily Hassles for Controls, and Good, Mixed and Poor Outcome Groups, Pre- and Post Group and Follow Up (Means and Standard Deviations)

	Control	Index Negative movers	Index Mixed Outcome	Index Positive Movers
Pre-group	46.4 (9.9)**	69.0 (15.3)	56.0 (13.8)	53.0 (12.2)
Post Group	48.7 (10.5)	48.8 (12.4)	49.0 (8.2)	46.7 (18.2)
Follow Up	42.9 (15.0)	52.0 (10.7)	50.6 (13.6)	49.7 (20.9)

*Difference between index and control significant, p = 0.001

Developmental Outcome Measures

All children were Assessed during the Vineland Adaptive Behaviour Scales at pre-group and follow up time points. Only those children over three were eligible to be tested using the Wechsler Pre School and Primary Scale of Intelligence. Results are reported here on the

Vineland Social and Communication Scales, and the WPPSI Verbal Performance and Full Scales for those children tested before the programme and at follow up.

Vineland Communication Domain

Table 14. Vineland Communication Domain Scores, for Index and Control Groups by Positive and Negative Change at Pre-group and Follow Up

	Control	Index Negative Outcome	Index Positive Outcome
Pre-group	86.5 (11.2)	87.4 (15.3)	87.9 (14.1)
Follow up	89.3 (10.5)	84.5 (12.8)	88.1 (11.0)

There were no significant differences between index and control groups at pre-group or follow up time points. Within the index group, the poor outcome group as defined by change in observation measures declined somewhat while the positive change group improved a little on their pre-group level. This trend was not of statistical significance (Table 14).

Vineland Socialisation Domain

Table 15. Vineland Socialisation Domain Scores, for Index and Control Groups by Positive and Negative change at Pre-group and Follow Up

	Control	Index Negative Outcome	Index Positive Outcome
Pre-group	75.0 (5.7)	71.8 (8.8)	74.2 (10.9)
Follow up	71.6 (6.4)	69.1 (6.7)	68.8 (8.6)

No significant differences were found between index or control groups, nor between mothers making a poor outcome and those making good progress (Table 15).

WPPSI Scales

Because of the small number of children old enough to have WPPSI Scores both at pre-group and follow up, no attempt was made to separate the index group by outcome. The data are presented both as tables and histograms (Tables 16 – 18).

Table 16. WPPSI Performance Scale: Pre-Group and Follow up Measures for Index and Control Group (Means and Standard Deviations)

	Control	Index
Pre-Group	92.5 (14.7)	89.5 (15.3)
Follow Up	93.1 (14.2)	96.2 (9.9)

Not significant

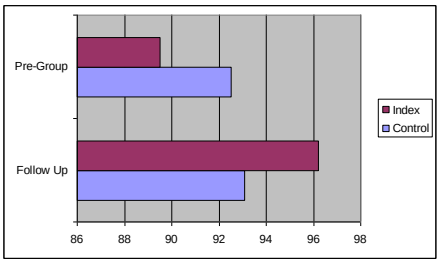


Table 17. WPPSI Verbal Scale: Pre-Group and Follow Up Measures for Index and Control Group (Means and Standard Deviations)

	Control	Index
Pre-Group	85.2 (14.6)	86.4 (12.3)
Follow Up	86.7 (12.5)	94.0 (12.5)

F = 3.8, p -0.06

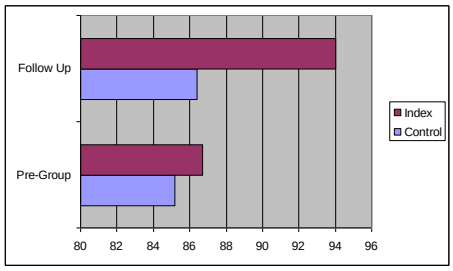
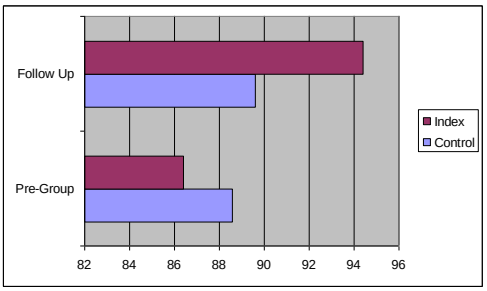


Table 18. WPPSI Full Scale: Pre-Group and Follow Up Measures for Index and Control Group (Means and Standard Deviations)

	Control	Index
Pre-Group	88.6 (9.6)	86.4 (13.6)
Follow Up	89.6 (7.6)	94.4 (11.1)

F = 4.3, p = 0.05



As can be seen in Tables 16 – 18, there are significant or almost significant improvements in the full scale and verbal scale of the WPPSI for the index group at follow up. The performance scale follows the same pattern but is not significant. The magnitude of the change, 6-8 IQ points, is sufficient to be clinically, as well as statistically, significant.

Number of areas of self-reported change

At the post-intervention interview and the one-year follow-up, index parents were asked to describe the changes they felt had occurred in themselves and their circumstances, particularly featuring matters to do with the child their own self confidence and self esteem. These areas were spontaneously itemised by each mother and personal to her. They were then asked to describe which areas, both of a positive and negative nature, they would attribute substantially to their experiences in taking part in the Mellow Parenting Programme and the interviewer sought support material in this regard. A frequency measure of self-reported changes due to Mellow Parenting was obtained and the same data was collected from control mothers for frequency of areas of positive and negative change. A comparison of this measure post intervention and one

year later between index and control groups shows that while control mothers reported substantial benefits from their involvement in the family centre programmes, the Mellow Parenting Group reported higher levels of change, which were maintained at follow up (Figures 13 and 14).

Areas of positive self reported change due to MP groups

1 YEAR LATER

Figure 13

Score	0	1	3	5	7	8	9	10	11
Index	2	0	3	0	1	1	1	12	33
Control	6	1	0	1	0	0	1	3	16

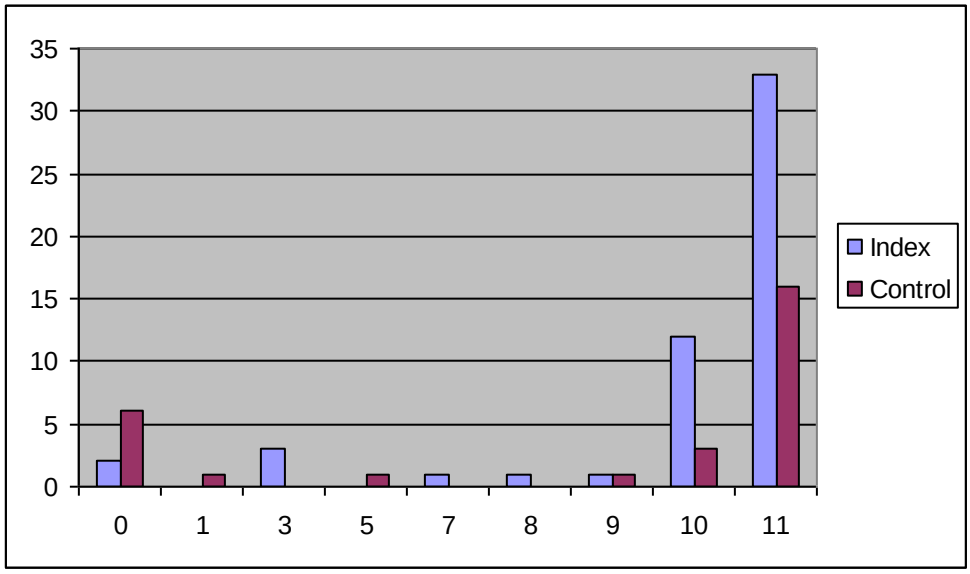
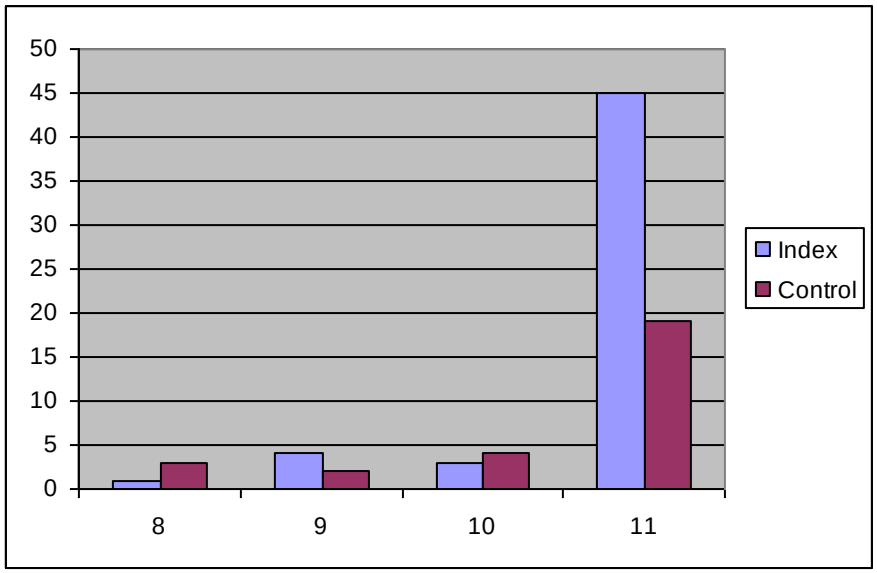


Figure 14

Areas of positive self reported change due to MP programme

Score Post MP Group

Score	8	9	10	11
Index	1	4	3	45
Control	3	2	4	19



The pattern of change across the three data points is significantly different in a direction favourable to the efficacy of the Mellow Parenting intervention, between the index and control families that were studied on a wide range of measures which include child behaviour problems; parental mental state; report of parental personal change; ability to cope with the daily hassles of child rearing; and important dimensions of observed parent-child interaction in the home.

DISCUSSION

The Mellow Parenting Programme was run successfully in four sites in Scotland. Implementation in a child and adolescent mental health service is outlined and will be the subject of a separate report.

The participants in both the Mellow Parenting programmes and a control group of participants using other family centre programmes, were all a very disadvantaged group. Indices of adverse childhood experiences, including hostile parenting, harsh discipline and placements in local authority care were common. Mothers also reported high frequencies of physical and sexual abuse. The mental health of women was generally poor, often in a context of unsupportive relationships with partners, including frank domestic violence. The women also experienced high levels of current environmental strain, including poor housing, hostile neighbourhoods and debt.

The control group were able to use all the services of their local family centre, and other community and mental health services. They are not an untreated control group, but involved in high quality supportive interventions, including childcare, family counselling and support. They report substantial improvements in their well-being from their involvement in the family centres. The comparisons are therefore a stringent test of whether the Mellow Parenting Programme can offer any advantages over existing programmes. In addition, the Scottish control group, although a disadvantaged group, show very considerable advantage over the index families on a number of pre-group descriptive characteristics. This again puts any positive findings into a context where changes in the index group are subject to stringent conditions since they have significantly more disadvantageous experiences and yet they often improve more than the controls. Ideally this would have been controlled by subject selection, but the constraints of samples from family centres in different localities reflected more or less favourable local conditions.

Significant changes were evident in the index group over and above the controls. These included improvement in the mother's mental state and her attribution of positive change to the group

experience. Child behaviour problems improved significantly as well as the child's development which also showed some positive changes. Observed changes in the parent-child interaction were significant between groups. Within the index group some mothers made more major progress, while others had a more mixed outcome or regressed. When mothers were classified into those making substantial improvement or not, the index group showed an advantage point in post group measures, which was maintained at one year follow up: an important finding.

The issues of who is able to benefit from the programme is clearly of academic, economic and clinical importance. Discriminant function analysis revealed that mothers with poor current relationships, but who had experienced some good relationships in the past, were those most likely to show the greatest change in mother-child relationships. By contrast, those who had had very poor early relationships, but were in a good marital relationship, did not make good progress. The positive change group could be seen as having an "affect hunger," that is, they had enough past experiences of good relationships to want to seek this from the group, and in that supportive environment begin to build a rewarding experience with their child. By contrast, those with very poor early experiences of a step or foster mother had clearly cathected their current partnership, and in that context, might be less willing to examine the past, seek a good relationship within the group or change their current relationship with the child, particularly where that might post a risk to their marriage or cohabitation relationship.

Maintenance of change in the mother-child relationship after the group is also a crucial clinical and service issue. Given that the groups were run in a variety of settings, the services available to the mothers post intervention were of variable accessibility, quality and content. Mothers who maintained improvement, or indeed continued to improve, were those who had relatively few life events, but they did continue to be in an unsupportive marriage or cohabitation. They had not, however, experienced negative consequences of their involvement in the group. Since conflict with a partner about attending the group, and conflict over trying out new ways of managing the child were two common negative effects of group involvement, it might seem that this is an issue

to tackle in implementing the programme. This had emerged as a clinical focus for concern, and some family centres are now running couple's or father's groups based on the original Mellow Parenting programme. It was noticeable that where the mother-child interaction did not improve, the child continued to have behaviour problems, but the directionality of causation is not evident. Nevertheless, this emphasises the importance of the active parenting intervention, and the focus on child management skills. Interestingly, mothers' mental state, primarily anxiety and depression played little role in separating the mothers who were able to make positive changes from those who did not.

IMPLICATIONS AND RECOMMENDATIONS

1. The Mellow Parenting Programme has been shown to convey substantial benefits to an extremely disadvantages group of women and their children when applied in a community setting.
2. Positive changes are evident in the mother's well being, the child's behaviour and development, and mother-child interaction.
3. It is possible to distinguish on pre-group interview those who are most likely to benefit from the programme. To some extent the willingness to invest emotional energy in the group and the child is the key factor, and the recruitment and free choice element of the programme would seem to be a step in the appropriate direction. Repertory Grid Measures derived from Malcolm Billinge have been used to examine this dimension and a full analysis of existing grid data would be worthwhile and is planned.
4. Maintenance of good change is related to not experiencing negative effects of group involvement, and this is also related to fewer continuing child behaviour problems, fewer life events and a poor marriage. This may be explained as lack of investment in changing the relationship with partner, but high investment in changing the relationship with the child. Attention is therefore drawn to the negotiation and interface of the Mellow Parenting Programme with partners of participating women, either by parallel groups, or some couple

involvement. Opposition to a woman's group attendance by a valued partner could clearly militate against the woman gaining maximally from the group.

5. While some dissemination has already taken place, given the now proven success of the programme, it would be appropriate to consider how the Mellow Parenting might develop. Experience to date has shown that the skills required are transferable but a formal training course including videotaped training support and ongoing supervision are essential. Since this is an intensive involvement, the possibility of seeking a major training partner, probably within the voluntary sector, should be considered, and the advice of the Department of Health will be sought on this issue.
6. The Health Economic Analysis of the programme will be separately elaborated by Prof. M Knapp, but an initial costing of the programme (Appendix 7).

DISSEMINATION: TRAINING

During the period of data collection for the Mellow Parenting Evaluation, no formal plan was made to offer training in Mellow Parenting to other groups as it was considered that such dissemination should await the results of the outcome study. However, several centres requested training, and a fully developed training programme with ongoing supervision have been offered in the following venues:

- Stockholm, Sweden (Post Natal Mother and Child Services)
- Germany (American Forces Child and Family Welfare Services, Zweibruchen)
- Israel (Yachdav, Jersusalem)
- New Addington Social Services Family Centre
- Wellcare, Croyden & Family Centres (inter-agency working)
- Family Centre Ashington Northumberland
- Gateshead Child Psychology Services

- Health Visitor Project, Wester Hailes, Edinburgh
- Birkenhead, Merseyside
- Child and Family Services, Manchester
- Oxton, Wirval
- Psychological Services, Fife
- All Women's Centre, Dunfermline
- Sailor's Reset, Kirkcaldy
- Child Protection Services, Fife
- Northumberland Child and Family Clinic, Abington, Northumberland
- Stockwell Family Social Services Family Centre
- Women's Family Mental Health Centre, Lambeth Healthcare Trust

Dissemination: Transferability/Replication

As well as the initial issue of disseminating a service which had not been fully evaluated, a second issue of the transferability of the programme to varying services was of interest.

Renauld (1998) carried out a waiting group controlled study of a group of eight mothers participating in a "Mellow Parenting" programme in Fife. In spite of the small numbers, she demonstrated an increase in positive affect from mothers, a decrease in negative affect from the mothers, a decrease in mothers' depression and anxiety and child behaviour problems.

A research evaluation of the programme at two centres in Northumberland is currently in progress. The Wester Hailes project is also subject to Scottish Office Evaluation.

A small scale pilot study and a single case study have been published confirming the effectiveness of Mellow Parenting, albeit in non-controlled trials. (Puckering, Evans, Maddox, Mills and Cox, 1996; Puckering, Rogers, Mills, Cox and Mattson-Graf, 1994).

The Mellow Parenting Coding System has also been used for the description of specific patterns of mother-child interaction in children with psychosomatic problems (Dr. Tom Craig, Guy's Hospital), children of very low birthweight (Kama Lambranos, Liverpool University) and children of mothers with severe post natal psychiatric problems (Dr. M. Berg-Broden, Stockholm).

The project has been presented at numerous scientific meetings and policy forums for the dissemination of good practice including Family Policy Study Unit (1996), Parent Forum (1996), Home Office Meeting on Antisocial Disorders (1997) and Michal Seiff Foundation (Keeping Children in Mind, 1997).

Appendix 1

ENTRY CRITERIA FOR CHILD AND FAMILY INTO INTENSIVE PARENTING PROJECT

Entry criteria for families are that there is a child under five years of age and that:

a) (i) The child is on the Child Protection Register

and / or

(ii) There is persistent or recurrent violence between adults in the household

and / or

(iii) The main caretaker has persistent difficulty in their relationship with the child (e.g. lack of feeling or affection or difficulty in establishing communication)

and / or

b) At least two of the following:

(i) The child has behavioural or emotional disorder of at least 3 months duration (excluding children with persuasive developmental disorders and those with moderate or severe learning difficulties).

(ii) The main caretaker has a mental disorder (excluding those where they are currently receiving in-patient treatment or have moderate or severe learning difficulties).

(iii) The main caretaker has persistent or recurrent relationship difficulties with their partner and/or family of origin.

(iv) There is a persistent or recurrent environmental stress such as social isolation, overcrowding or threat of violence.

Appendix 2

This report does not include data collected from the London sample. As Table A1 shows, there is a viable London index group for pre- and post Mellow Parenting intervention on interview and observational measure. Data for one year post lacks observational measures for more than 50% of cases. The London contrast group is small and observational data are lacking, in part because the initially proposed contrast service closed and there was difficulty finding alternatives. Since, as noted below, the Mellow Parenting programme as run in Scotland and London contained some essential differences in recruitment, context, staffing and applying the programme, the samples require separate consideration. Care needs to be taken in any comparison made between London experimental groups and contrast groups from Scotland. It is our intention to publish details of the London data analysis at a later date and to discuss implications of the London experience for the dissemination of the Mellow Parenting programme.

Table A1 London Data Set

	Index	Controls
Pre-group interview	31	7
Post group interview	20	3
Follow-up interview	9	0
Pre-group observations	24	0
Post group observations	23	0
Follow-up observations	13	0
Developmental data	0	0

nb Some missing data may be retrievable but has not yet been supplied in an analysable form.

In London, the programme was implemented in the under gives day unit of an NHS child and adolescent mental health service. The other services offered included a full range of outpatient

child and adolescent mental health services staffed by multidisciplinary teams. As the site was within a training hospital, professionals in training rotated through the unit. Established staff comprised a senior nurse, nursery nurse and occupational therapist, fully trained with some input from a child psychologist and social worker. All the established full-time staff changed during the programme to one senior nurse and two occupational therapists. Because there were no crèche facilities, groups could only be run by involving staff other than the full time staff for some of the activities. This necessarily led to some discontinuity in the daily programme.

Recruitment of subjects was from referrals to the service. Then staff had to respond to all referrals whether they were suitable for the programme or not. They were, therefore, running other therapeutic programmes alongside the Mellow Parenting Programme.

Given that the theoretical basis of the intervention was that the mother's own experiences of relationships with her own parents, past and current partners, and her ability to develop a relationship with her child were linked, the use of different staff during the day provided fewer opportunities for these links to be identified and processed.

The "group" effect, which was considered by staff and participants in Scotland to be so powerful, was much less fully developed. The physical location and layout of the centre limited the number of participants in each group to a maximum of four families. The nursing and occupational therapy staff, who were primarily responsible for implementing the programme for later groups, were also highly trained in individual therapy methods, but less assured in their implementation of group methods. They were also uncomfortable with the use of the video feedback group which was sometimes run by staff other than the three core team members. A further importance difference was that the family centre in Scotland was able to provide continuity in support for the families, both during the programme and after it, including day care for the children.

Care should therefore be exercised in contrasting the London sample with the available Scottish alternatives who differ in significant ways from the London sample.

Appendix 3

MELLOW PARENTING PROGRAMME

PERSONAL GROUP	PARENTING WORKSHOP	SHARED ACTIVITIES	HOMEWORK
We can work it out	Understanding families	Iced biscuits	Diary 1
Who am I? Inside feelings	Child watching	Play dough	Diary 2
My family then and now	Everyone is different	Chocolate crackles	Everyone is different
Life stories	Keeping them busy	Collage	Keeping them busy
The best days of your life	Spotting trouble before it spots you	Football	Spotting trouble
Behind the bike shed	When you feel like exploding	Gloop	My child

Pregnancy	**Changing behaviour 1**	**Hand painting**	**Changing child behaviour**
Birth	**Changing behaviour 2**	**Visit to library**	**Changing child behaviour**
Feeling good, feeling horrible	**Being nice, being nasty**	**Salt dough modelling**	**Being nice, being nasty**
My future	**No-one loves a whining child**	**Visit to supermarket**	**Handling distress**
You and whose army	**Handling siblings**	**Sand/water play**	**Changing other people's behaviour**
When you feel like exploding	**When you feel like exploding**	**Picnic**	**My future**
Child abuse		**Christmas/Easter cards**	
How to hold on		**Party**	

THE MELLOW PARENTING CODING SYSTEM FOR HOME OBSERVATIONS

There is a clear need for a way of assessing parenting that is easy and quick to use but also gives an accurate and detailed picture of what is going on in everyday interactions between parents and children at home. Parenting is the development of a relationship in the social and emotional network of the family. All of us regularly use our intuition about the nature of relationships, and we know what we see when we work with families in a clinical setting. But we seldom quantify our findings in a systematic way or describe in any detail what we actually observe. Almost all the treatment interventions in child and family mental health are intended to change the quality of parent-child relationships but there are almost no instances in which this has been assessed. As Jenner and McCarthy (1995) comment:-

"While quantitative measures of parental functioning have been developed in the field of developmental psychology, to our knowledge very few such measures have been developed specifically for use in assessing parenting in clinical settings, and for the assessments increasingly required by courts."

Current methods of parental assessment have their drawbacks. There are widely used objective descriptions of the type and severity of problematic child conduct but these do not document the process of interactions and leave out the parent's cognitions, attitudes and feelings. Children themselves are rarely asked how the parenting they are receiving feels to them unless significant harm or sexual abuse is the issue (Fivush R 1991; Steward, Busey and Goodman 1993). When family functioning is assessed, clinical judgements are arrived at from descriptions of children's behaviour taken from parents. But since parents may not be able to report at all accurately what they actually do, this data would be more helpful if construed as a rich insight into parental attitudes rather than a description of mutual interaction. Ratings of parenting care based on a worker's observations during a family encounter in a professional setting (Billinge 1992; Anderson, Hetherington, Reiss and Howe 1994) are a sounder assessment method although they often still lack concrete evidence on key focal aspects of parenting that shape development.

Family interview schedules describing current functioning have been available for many years (Rutter and Brown 1966; Taylor, Schacter, Thorley and Weiselberg 1986). They are extremely reliable but too unwieldy and time-consuming for everyday clinical use; moreover, considerable training is required.

As for the systemic formulations preceding family therapy where dysfunctional multiple relationships are investigated (Olson 1989; Epstein, Baldwin and Bishop 1983) here the issue of parenting is hardly ever dealt with in a direct way (but see Byng-Hall 1995 for an exception). A popular approach has been the structured family interview backed up by a checklist and rating scale of observed behaviour in the interview, using the same dimensions (Wilkinson 1993). It combines a training and assessment method and records different levels of family functioning including parental style; but still the actual process of interaction is missing.

Specific indices of children's functioning in intimate relationships seen at home and in the clinic or laboratory can be found in observed attachment behaviours (Ainsworth, Blehar, Waters and Wall 1978; Crittenden and Clausen 1996). These address the socio-emotional competence of the child but unfortunately these again display only one side of the parent-child relationship. Such indices of attachment seem to have powerful epigenetic continuity for children's relationships (Main and Cassidy 1988; Sroufe 1989) but give little information about parenting style.

A more useful approach associated with parent-training schemes (Forehand and McMahon 1981; Patterson 1990; Webster-Stratton and Herbert 1993) is based on videotaped laboratory dyadic play and home interaction which captures just one aspect of interaction – albeit an important one; namely the behavioural control procedures that are operating in the family. Here frequencies for those behaviours are counted separately so again there are no measures of the process of interaction (Robinson and Eyberg 1981). There is, furthermore, no basis here for understanding other important aspects such as feelings and the clarity and ease of communicative style, all of which interdepend in crucially important ways. It may be, for example, that the amount and type

of discipline in a relationship is determined by what else is going on between the dyad (Gardner 1992). Another variant on the use of control strategies is to take the ratio of child centred versus child directed behaviour from parents and use this as the assessment and indicator for potential change (Jenner 1992).

Yet another system focuses just on verbal and non-verbal positive communication. This is Video Home Training (Jansen and Wels 1996) which relies on limited videotaped episodes of positive interaction for its database in assessing parenting. Integration of learning theory and attachment concepts in assessment, using a mixture of clinical interview and observation of interaction during play and the stranger situation is however a parsimonious model that is worth developing (Speltz 1990). Certainly we know that it is worth persevering to capture the multi-dimensional aspects of interactive style between parent and child since observed interaction at home can distinguish problematic relationships and emotional abuse together with concurrent and future childhood disturbance (Dowdney, Mrazak, Quinton and Rutter 1985; Mills and Puckering 1985; Puckering, Rogers, Mills, Cox and Mattsson-Graff 1994; Puckering, Cox, Mills and Pound 1995).

Good practice necessarily dictates that along with the kind of observed interaction, the Mellow Parenting Assessment (MPA) this article will describe a competent assessment requires other kinds of information taken from several sources. Parenting after all goes on in a wide variety of family settings which have a consistent influence on relationships (Rutter 1989). Realistically no measure can be free from bias or judgement, so a multiple assessment is advisable to overcome the limitations of any one method. There are so many levels of description in observing a parent and child and they are complementary in trying to make sense of what is happening.

Nowadays in assessing parenting, we not only want a picture of how burdensome the everyday hassles of caring for a child are for any particular parent (Crnic and Greenbergy 1990) but we should be taking a view on what environmental risks parents may be exposing their child to (Billings 1992; Elton 1988). We are also likely to be seeking some way into the intrapsychic world

of a parent since this so often becomes the external world of the child. To date, few strategies are well developed but some insight may be obtained using one or more of the following:- the parents' representational world (Stern 1995); the causal, attributional beliefs parents have about offspring (Stratton, Heard, Hanks, Munton, Brewin and Davidson 1986); personal grids about parenting (Billinge 1992, Puckering, Evans, Maddox and Mills 1996); parental personal narratives (Wahler 1995); the adult attachment assessment (Main and Goldwyn 1985) and, lastly, interviews on the "meaning of the child" (Doolan 1996; Weston 1994; Reder and Duncan 1995).

Child care professionals, and that includes both clinicians and researchers involved in the field of normal development and family psychopathology, are offered here in a concise, user-friendly observational coding system for describing interaction. We have found it frustrating that while there are complex and complicated systems in the (largely research) literature, these are of no use to the hard-pressed clinician who requires an assessment method that helps focus their own impressions on what is really going on in the family, and can if necessary, provide hard evidence for clinical formulations for child protection work, case conferences and evidence for the family courts.

An effective method for assessing parenting can also pinpoint what a therapeutic intervention might help to change in ongoing interaction. We should be able to specify how the quality of parenting can be, or has been, improved as well as providing a baseline from which progress, or not, can be monitored over time. Assessment gives a snapshot of family adaptation ay any one time, not an attributional portrait for all time. Because it looks at the process of interaction, clinicians are encouraged to see parenting from the child's perspective. This kind of assessment offers considerable benefits to new workers in the child care field or those requiring additional training. Parenting per se is seldom, for instance, a topic in social work training or probation work (Lucey and Fellow-Smith 1993) while the relatively recent role of the Guardian ad Litem, for example, demands important judgements on the adequacy of children's care from non experts. Multi-agency work involves a wide range of child care professionals who rightly see different

aspects of the relationship between parent and child so that clarity and competence in assessment procedures is vital.

Observing interaction is vital since it is now clear not only that the quality of parental care that adults experienced in their own childhoods is an important predictive factor for affective psychiatric disorders, but that interactive processes should be considered an important cross-generation transmission mechanism for psychopathology in children (Cohn, Cowan and Pearson 1992). A description of interaction which pays attention to the specificity of effects in the psychological consequences to the child and concentrates on interactive style to capture the child's participation and feedback to the parents is now seen as necessary documentation in understanding the mediating influences between family distress, illness and life stress events and what happens to the child in terms of cognitive, emotional and social outcomes (Reader and Lucey 1995; Lyons-Ruth 1995). As Cox, Puckering and Mills and Pound (1995) point out:-

"In very young children it can be argued that parent/child interaction is the final common path of the variety of stressors and adversities that may affect a child, in other words the crucial mediator of stressors."

We know that psychological problems in young people in Britain are at their highest level ever (Rutter and Smith 1995). There is widespread anxiety in today's society and its media (Campion 1995; Smith 1996) that modern parents are giving up on trying to retain influence over their children and that parental "care and control" has diminished value in the face of a seemingly autonomous youth culture and the fragmented nature of much modern family life (Mills and Puckering 1995).

Certainly many research studies (as reviewed by Cummings and Davies 1994) now agree that amongst the most important risk factors in childhood are environmental stressors which make the task of everyday parenting particularly problematic, the nature of the parent's own childhood experiences which in turn affect how they can parent their children, and – most important of all, the quality of the inter-parental relationship. Here one must consider the adult partnership

children are being exposed to as well as how the relationship between actual parents is mediated by the custodial parent. Rutter (1989) also emphasises how strong the evidence is for inter-parental discord, and exposure to hostility, being the crucial mediator in children's disturbance. Preliminary investigations of breakdown in reconstituted families are now revealing all kinds of psychological problems for the children in their midst (Cockett and Tripp 1994).

While specificity in linking particular background family variables to particular styles of parenting response is fast being detailed (Cox, Puckering, Mills and Pound 1995) changes in parenting as a result of such stressors are an accepted mechanism for understanding how the psychological well-being of children gets influenced inside the family. It is important, however to distinguish between parenting which is disabled by virtue of these stressors and the absence of any or many skills in a parent's repertoire that would make the handling of a child easier and more effective. Parenting is a multi dimensional task and also culturally based. There is certainly no *one* way to parent a child, and as Puckering, Rogers, Mills, Cox and Mattson-Graff (1994) put it:-

"It involves an almost endlessly diverse and shifting mixture of care, affection, control and stimulation; all of this supported by a complex array of feelings and interactions which partly reflect the parent's internal world and partly the child's temperament and reactions."

But no matter how child rearing is accomplished, or how experts construe it, it has to be about the development or a relationship, between parent and child, in the context of a social and emotional network representing all the other relationships within a family. It is extraordinary that until Hinde and Stevenson-Hinde's seminal book *Relationships within Families* (1988) was published, a relationship perspective was not an organising principle for developmental research or clinical thinking about parenting. Instead the focus, if there was one, was on diffuse social support and limited parent training. Assessing relationships constitutes part of a social science which, as Hinde himself points out, is still in its infancy.

Describing interactions in intergenerational relationships is notoriously difficult and complicated. Core themes typically reflect security, trust, intimacy and attachment (Bowlby 1980; Belsky 1984), affect regulation (Osofsky 1995) intersubjectivity, communicative competence and co-operative sharing (Wahler 1995; Murray and Trevarthen 1986; Puckering, Dowdney, Skuse, Heptinstall and ZsurSpiro 1987; Parpal and Maccoby 1985), autonomy (Brazelton and Cramer 1992) and how issues about power and control are dealt with (Crittenden 1988). There is little consensus about how relationships should be operationalised and measured. Perceptions, expectations, intentions and feelings are also an integral part of the behavioural interactions that make up the character and meaning of any ongoing relationship. As Radke-Yarrow, Richters and Wilson (1988) point out:-

"Parents and children relate to each other on many different dimensions (love, authority, dependence) in many kinds of interaction (involving care, control, instruction, companionship) and through all these run some core themes for the participants such as security, trust and closeness."

In the MPA, core themes and dimensions are derived from theory, clinical work with families and the author's own experience as parents. Abstract concepts need to be translated into empirical, behavioural interactions with consensual meaning and a social context that captures important aspects of the interaction process itself; a sense of the mutual style of interaction between parent and child taken as a sequential pattern of behaviour. Although a truism, it is worth pointing out that *interaction* is what parent and child do when they are being with each other, the ebb and flow of exchanges between them, so of course, both parties need to be observed together. Parenting is a multi-level operating; being at home manager, planner and organiser. Someone who holds the boundaries, responds to feelings in a sensitive and well-timed way and respects other's individuality. Doing it well is like being a really good cook, doing lots of things simultaneously, so a coding system needs to take account of this. Different parenting dimensions can be in operation in parallel and often there is a structure where codes of one dimension are embedded or overlap.

One question any coding system for the assessment of parenting must address is, what conceptual dimensions make sense where there is concern about parenting, or where families are seen in the context of parental breakdown. Measurements on the Mellow Parenting Assessment (MPA) can encompass life with a baby, a toddler and a school age child. What aspects of parenting may be modifiable is an open question. Problems in parenting in one domain do not necessarily imply that deficits exist across the board. A parent, for example, who is low in warmth and responsivity, may nevertheless exercise firm and consistent control. Or, although they seem wayward in matters of control, a parent may happily support and encourage their child's bids for independence and autonomy.

Parenting we should also recognise, may have less to do with the presence or absence of particular skills and more to do with general problems of inter personal relationships that reflect difficulties in empathy and sensitivity in perceiving and dealing with another's anxieties and needs.

There is a broad consensus in the clinical research literature on at least four parenting domains. First, there is the idea of responsiveness, a dimension describing attention to and involvement with the child and his/her world in a way which is both contingent on the child's own behaviour and expresses affection. Responsivity is described as, variously, promoting concentration on the child's pretend play (Dunn, Bretherton and Munn 1987; Feise 1990); making efforts to encourage and focus attention (Belsky 1984); being responsive in social exchanges (Dowdney, Skuse, Rutter, Quinton and Mrazek 1985) and using maternal facilitating behaviour with the child's reciprocal behaviour as characterised as "affective sharing" (Stein, Woolley, Cooper and Fairburn 1993). The idea of parental involvement on a shared task with the child reciprocating is extended, for example by Mills and Puckering (1985) who use the concept of "meshing" or reciprocity in the context of mutual enjoyment and Wahler (1995) who talks about synchrony which he describes as the timing and appropriateness of responsive social exchanges between two participants. Bruner (1984) summarised these ideas with his notion of a parent providing

"scaffolding" for their child's social world, and Lock (1990) extended this to his linguistic environment of the child. These features owe a debt both to ethologists (Stern 1995) and communication theorists (Trevarthen 1979). It feels intuitively right to consider here the every day concepts of empathy and sensitivity – human qualities hugely important to successful relationships, yet defying precise measurement.

A second domain is the coercive discourse between parent and child around issues of power – usually designated as conflict and control (Patterson 1990; Mzarak, Dowdney, Rutter and Quinton 1982; Radke-Yarrow, Cummings Kuczynski and Chapman 1985). Often, parents see physical punishment as a way of "training" children (Crittenden 1988). Child assertive behaviours such as opposition and aggression do not enter the repertoire much before the end of the first year in the normal way, but efforts are made to influence children's functioning – both pro-social and deviant, earlier on in life using problem-solving approaches which involve more harmonious and positive behaviours such as co-operation, negotiation and compliance (Londerville and Main 1981; Parpal and Maccoby 1985; Puckering, Dowdney, Skuse, Heptinstall and Zsurspiro 1987; Westermann 1990).

The third domain is about emotional mood as an essential conveyor of meaning. Most frequently featured in the research literature is the idea of mutual negative affectivity between a dyad. (Radke-Yarrow, Richters and Wilson 1988) This concept is operationalised as parental dismissive statements (Dowdney, Skuse, Quinton, Rutter and Mrazek 1995), focussed hostility on the child (Hinde and Stevenson-Hinde 1988) and maternal intrusions which cut across ongoing topic of interaction and occur with inappropriate parental affect (Brown and Saqi 1987). Researchers (Cox, Puckering, Mills, Owen and Pound 1992; Stratton 1992) have made a distinction on parental attributions towards the child. On the one hand there is a constructive boundary setting which all young children need and on the other, hostile criticism of the child as a person rather than a specific action which is dispproved of. These aspects of parent-child

interaction were summed up in Patterson and Dishion's (1988) descriptions of dysphoric cycles of interaction where parents became, in their words, the "unacknowledged victims."

The fourth domain is around issues of autonomy (Brazelton and Cramer 1992) with there being space for the child's own spontaneity to develop (Winnicott 1965; Balint 1993). Here, developmental thinking is much influenced by the theoretical work of psychoanalytic clinicians, while professionals working in the area of child maltreatment remark on how rarely abusing parents see their child as a separate individual with needs and rights of their own (Jenkins 1987).

All these concepts exist, of course, as part of our social culture and are familiar to everyone who has grown up in a family and/or currently lives in a relationship. The MPA incorporates features from these domains, often developing them in a concrete way but it also makes additions in areas such as anticipation (Ellwood 1986), the use of child-care routines (Gandini 1989) and complex behaviour occasioned by child distress (Puckering, Cox, Mills and Pound 1995).

Once empirical, specific behaviours are coded with clear operational criteria and conventions for when these should be applied (Table 1), it is possible to make judgements about their occurrence based on consensual meanings, as long as coding categories are mutually exclusive. The MPA Coding Manual (Mills and Puckering 1992) contains exhaustive definitions of codes and details of coding structure, guidelines for their use and examples.

The methodology used to record the interaction process itself, its temporal dimensions, is that of event recording for interactive, turn-taking episodes comprising three sequentially-taken codes contributed by parent and child and known as "mini-sequences". The frequency of interactive episodes in particular parenting domains can be counted every time they happen during the observation period. Thus parental behaviour can be related immediately to child behaviour by a preceding or subsequent behaviour of the other party (here time interval recording is abandoned, so the precise duration of each behavioural event which is time-consuming to record, is not

required). Each recorded episode is triggered by a preselected, pre-coded behaviour from either parent or child which focuses on a particular mini-sequence in a domain of enquiry and starts the coding process. Figure 1 gives an illustration of mini-sequence structure. Pre-specified outcome codes also determine some sequences such as those where there is distress or control.

These episodes or mini-sequences are, in one sense, arbitrary in chopping up long, sequences of interaction but each designated episode is informed by the authors' experience of coding literally thousands of hours of interactive activity. This method is selective and certainly not an unwieldy trawl for all behaviour that occurs (Dowdney, Mrazek, Quinton and Rutter 1984 have a comprehensive discussion of the technicalities of observational recording). As well as recording focussed interactive episodes it is advisable to use interval event sampling (10 second intervals are appropriate) for certain contextual events such as dyadic proximity, level of task involvement between the parties and the more global contexts of, for example, independent activity, joint chat or dinner time – as required. Technically, the MPA can be considered as a hybrid of sequential event recording and time interval sampling and is devised to be as economic and focussed as possible.

Interaction can be coded live by scoring from half-hour videotapes of naturalistic observation in the home is accurate, user-friendly and less time consuming. A home setting with the family following their normal daily life, is the optimum condition for recording interaction since familiar routines take place and data is minimally distorted since home is, after all, where much of parenting interaction takes place (Achenback 1983). Daily happenings such as family mealtimes, bath times and caretaking or joint activities offer similar challenges and a standardised context for all families. (The ubiquitous, ever-present television can be muted if required). How parents and children are getting along is influenced by the context they are in and what they are doing. It is possible to use this observational system in a clinic setting but unrestricted interaction in a familiar setting gives a better sense of what goes on when the family is not observed (the family is asked to do whatever they would ordinarily be doing at this point in their day, and they receive a

small fee for their co-operation). It is important to be sensitive to the uncomfortableness of being assessed. The presence of a video camera, with someone filming, obviously changes behaviour but parents can be asked how typical of other days together a particular recording may be, for what is important is how recording may be changing interaction, and a parental commentary is always useful here.

The constructs underlying the parenting dimensions that comprise the MPA are, as has been indicated, derived from previous research work and clinical theory relevant to child development and psychopathology. Furthermore they have received empirical support from previous studies by the authors (Mills, Puckering, Pound and Cox and Puckering 1985; Ellwood 1986; Cox, Puckering, Pound and Mills 1987; Cox, Puckering, Pound, Mills and Owen 1990; Puckering, Rogers, Mills and Cox, Mattsson-Graff; Puckering, Cox, Mills and Pound 1995; Puckering, Evans, Maddox and Mills 1996).

An important development in the current usage of the MPA employs a shortened version of key marker , interactive codes, positive and negative, in each dimension. Increased accuracy and speed of operation has been gained and the revised system incorporates codes amenable to change over time (Table 2). This version of the MPA, known as BOSS is currently being developed and used in a large-scale research programme evaluating the efficacy over the long-term of different intervention strategies with families where there is grave concern about parenting (Puckering, Mills, Cox, Maddox and Evans 1996).

There are six dimensions in the MPA, all recorded by way of mini-sequences, which contain coded behaviours specific to each domain, taken sequentially from both parent and child. Each parenting construct has positive and negative features and dimensions can overlap in time or be sequentially embedded in each other to reflex the complexity of human social interaction (Fig 2). They can be applied both to social situations, play and joint activity and caretaking (where no judgement is made about the degree of cleansing that might be thought appropriate). At all times

while doing an MPA, cognizance is given to the intention of the parent, the pragmatics of the situation and the affective quality that characterises the social interchanges. An allowance for the child's age and developmental stage is built into the coding system. Table 3 illustrates comparability across child age within domains.

The MPS dimensions are as follows:-

1) **Anticipation** – a parent can be seen to prepare the child for changes in activity or caretaking by facilitating a known routine, giving prior warning, providing information or distracting the child so that the parent's agenda is easier to achieve and accomplished with the least possible friction between the dyad.

2) **Autonomy** – The parent is seen to show an awareness of the child's individuality. The child is allowed to exercise choice, to behave spontaneously while the parent monitors ongoing activity, to receive encouragement and help when try things out for him/herself, or to have their feelings acknowledged where the parent cannot give the child his/her own way. It is assumed that the child can influence the parent by the parent following protests or being prepared to meet their needs.

3) **Responsivity** – warmth and stimulation. Parent and child display positive and negative affect to each other in a variety of ways – by tone, demeanour, gesture and verbally. It often accompanies a code from another dimension. They are seen to share each other's world when one makes a cognitive elaboration to the other's current focus of interest called "meshing". The mutual, positive affective quality such as "having fun together" during caretaking is noted, as is a lack of emotional containment with negativity such as hostile criticism or lack of support and rough treatment…

4) **Co-operation** – Symmetrical compliance and co-operation between parent and child is recorded. The parent can facilitate the situation in some way before asking for co-operation or compliance, the couple can be seen to negotiate together, or the child's request can receive an explanation where compliance is not possible.

5) **Distress –** Comfort and support needs to be offered for a child who is upset, hurt or miserable and a bout of distress, defined as the child starting to whine or cry, is handled in such a way that the issue is sorted out and the emotional upset contained. Number and length of distress sequences are noted. Miserable distress is distinguished from any manipulation. Parents can contain, avert or precipitate distress in children and do this in an unsupportive, negative way, a coercive distress cycle or by offering containment for the child's feelings.

6) **Control and Conflict** – Length and frequency of all control episodes is noted, and they are defined as episodes of interaction beginning with non-compliant, oppositional or prohibited child behaviour. Control is differentiated from co-operation by the parent's displayed intent for achieving compliance. Sequences are characterised as dealing with legitimate issues in this domain and where these were ineffectively tackled – for example, ignoring a safety issue, a lapse of control is noted. Sequences are scrutinised for effective handling by the parent. Success in managing control issues between parent and child can be evaluated on the following criteria:- a) a positive sequence ending, for example, child compliance; b) control not accompanied by the child showing distress or anger; c) a style of handling control which diffuses rather than escalates tension and intensity of response between the parties. The parent, child or both, can be responsible for escalating conflict.

With any of these dimensions, issues of poor timing and synchrony, parental emotional inconsistency and appropriateness of developmental demands in tasks undertaken by the child

are taken into account. Proximity of the parties, levels of mutual attentional involvement and the social context of activity are monitored throughout.

It has been found using data from parent-child relationships with children under five years of age who are attending Family Centres (Cox, Puckering, Mills, Owen and Pound 1992) that these observational measures have a high degree of reliability as illustrated by comparisons of the same samples of videotaped, home interaction coded by four independent observers familiar with the system who were blind to any other circumstances or background information of the families. Table 4 provides the findings for inter-rater reliability on MPA's six dimensions with regard to a) the occurrence or not of a mini-sequence and the type of mini-sequence b) the occurrence and sequential position in mini-sequences for each code and c) the occurrence of the same context code (proximity, involvement, social setting/activity) within a designated (10 sec interval) for time interval sampling. The structural complexity of control and conflict required additional inter-rater elements (Table 5). In the % of cases where there was disagreement, a consensus was reached. While this carries a risk of drift (Murphy and Goodall 1980) the writing of examples into the Coding Manual (Mills and Puckering 1992) and rigorous reference of ambiguous examples to the manual was used to maintain reliability and stability of definitions. Individual threshold reliability for particular codes were tested to guard against the possibility of individual bias by documenting the relative frequency with which observers used them (Table 6). A satisfactory level of reliability for MPA was therefore achieved without bias or selective reporting.

The MPA contains a very wide sample of all aspects of interactive behaviour that occur naturally during parenting and that are actually seen to occur in an unstructured family setting and so this assessment method has face validity. Table 7 sets out frequency data for mini-sequences taken per hour for all six dimensions. During the development phase of the MPA, observations were made on multiple occasions and in several different research settings and coding lasted one or two hours on each occasion. Acceptable validity for the MPA is illustrated in the following ways:-

a) Construct validity has been discussed earlier in this paper and Fig 3 shows a factor analysis of the observed records of 69 parent-child dyads from high psychosocial risk families. It should be noted that autonomy in such families hardly features a baseline data collection, and only gets established after successful interventions have taken place.

b) One illustration of validity is where there is agreement on the quality of parenting between, for example, an observed dimension on the MPA, for instance – responsivity (warmth and stimulation on the MPA) and a warmth rating and a sensitivity rating where independent raters come to global judgements from direct observations using a 5-point scale (Puckering, Rogers, Mills, Cox and Mattsson-Graff 1994). Table 8 shows a significant association of these two measures. This data comes from 21 parents with an index child under five who were attending a family centre for a group intervention for those families with severe parenting difficulties.

c) Another question for concurrent validity is whether an independent, interview measure of the emotional and behavioural disturbances of a sample of 2-3 year old children using the Richman Child Behaviour Rating Scale (Richman, Stevenson and Graham 1983) with a categorical analysis of three or more symptoms indicating child psychiatric disorder, corresponds to current parenting style and handling of the relationship as evidenced from observational measures on the MPA. This data on responsivity (warmth and stimulation), autonomy and anticipation is taken from two, one-hour videotapes recorded in the home and comes from 69, children (mean age months) who were causing difficulty to their mothers who (mostly in their twenties) came from under-resourced inner-city areas (Cox, Puckering, Mills, Owen and Pound 1992). It can be seen that there is significant association between these specified MPA parenting dimensions and parental reported difficulty in various aspects of child care and control for under five children when they were interviewed independently by clinicians making home visits. Where parental style and interaction showed positive effects in Autonomy, Co-operation, Responsivity and Warmth, children showed significantly fewer behavioural difficulties (Table 9).

d) Another way of evaluating validity comes from monitoring changes in parenting style across time using single-case methodology (Gilgun, Daly and Handel 1992) where there is grave concern about parenting. (Puckering, Evans, Maddox and Mills 1996). Here an hour's interaction at meal times, between a parent referred with her two-year old boy for therapeutic help in an intensive parenting programme was assessed using the MPA on three occasions – baseline, 4-months and one year later. Concurrently, a family interview (Rutter and Brown 1966) and the child's developmental status was taken and the parent's subjective experience of parenting was assessed at the same three time points using an estimate of parental strain (Crnic Parental Daily Hassles Scale) and her Repertory grid (Chambers and Grice 1986) looking at her own construction of parenting and herself was also obtained in a clinical interview. Tables 9 and 10 and Fig 4 show the parallel, systematic changes across these different measures which capture different aspects of the experience of being a parent.

e) Change on four of the six parenting dimensions can be demonstrated, comparing families who received long-term intensive, intervention for parenting difficulties and matched, waiting list control families (Cox, Puckering, Mills, Owen and Pound 1992). Broadly speaking, these two groups represent relationships between parents and children where there was poor parenting and successful intervention occurred and where no parenting support was being given. Interaction scores taken at baseline and again eight months later were coded from two hours' caretaking activity of young children (mean age 22 months) in 21 parent-child dyads referred by clinicians and compared to the MPA scores for a contrast group of parents (n=20), similarly under-resourced. Differences over time in quality of parenting using the MPA can be demonstrated from parents coming from these different treatment groups (Table 11).

In these ways, an acceptable, cohesive account of the MPA's validity is illustrated here.

The MPA is currently being used in a variety of ways in different clinical and research settings. Mini-sequence frequencies in different dimensions can be compared for each parent-child dyad to assess parental strengths and weaknesses or the same dyad's interaction can be compared across time on the different dimensions to pick up change. Histograms using frequencies for mini-sequences on each dimension can be used to compare and contrast parenting styles between different families. The MPA has formed the basis for a long-term evaluation of an early intervention project which assesses change in parent-child relationships. Pilot findings (Puckering, Rogers, Mills, Cox and Mattsonn-Graff 1994) on the scheme's success in Family Centres, suggest the MPA is sensitive in reflecting substantial changes on its dimensions associated with positive gains in treatment when these are measured in the home. Interactions on the dimension of autonomy and responsivity doubled in frequency over four months, warmth increased one-half in that time and negative aspects of emotional containment (rough treatment, verbal negativity and criticism) declined to one fifth of their original level. (Table 12; Fig 5) A clinic, rather than a home based research evaluation, using a modified form of the MPA is in use in a London teaching hospital investigating the impact of parental psychosomatic disorder on young children (Craig 1995).

Evidence for the flexibility, scope and user-friendly approach for the MPA as a clinical assessment procedure, either in its entirety or adapted to specific uses, comes from its operation in many settings in Britain and Europe in the last few years. In Sweden, it has been applied in intensive-care mother and infant, community care units in the inner city and in infant psychiatry centres. In Germany, it forms the basis for an assessment and psychiatric intervention with preschool children living in troubled families serving with the US army. In Israel, the MPA parenting dimensions have been included in a nation-wide organisation operating a couple of hundred projects which educate and support deprived parents from many ethnic backgrounds. In Scotland, in addition to its use in parenting support groups with the under fives, it has been used to form the basis for child protection procedures, has been presented as evidence to family court proceedings and forms a basis for the work of

Guardian ad Litem. It is also used as an assessment in social work departments and, specifically, for forming couples-groups in parent support work. In London, it is used as part of a family advice package with normal families in primary health care settings, for parent education in Family Service and Child Guidance units, at the child psychiatry day unit of a large teaching hospital for both teaching and research, in an intercultural mental health centre for women and families as a diagnostic procedure, and in two different voluntary sector projects to inform their work supporting single-parent and homeless families and offering home-visiting schemes. It has also formed the basis of "do it yourself" parental support and advice videos issued by a London-based television company.

Finally, direct evidence of the outcome of parenting where the MPA is used for evaluation and intervention, and an account of the association between parenting styles and current psychosocial factors, will be available shortly (Puckering, Mills, Cox, Maddox and Evans 1996). The MPA is theoretically driven, but it is also a user-friendly way of recognising potential and actual difficulties in parenting and offering a way of doing this early enough in a child's life so that change is realistically possible. If relationship problems cannot be resolved, it gives confidence in making decisions about the outcome of parenting breakdown which carry a heavy burden whether court proceedings are implicated or not. We work in the knowledge that most parents want what is best for their child and with an understanding that being able to describe the normal patterns of behaving in intergenerational relationships such as this system provides, can inform all manner of parent education and family support services caring for children as well as providing a guide to policy and practice for clinicians and professionals working in the child-care field.

Table 1 - Example of MPA Coding Manual:

Parental Criticism CR

Definition: Statements that directly criticise the child by tone or content imply inadequacy on his part. Displeasure may be conveyed by sarcasm, imitation, exasperation, name calling, blaming or accusations or belittling or rejecting the child.

Guidelines

1. Requires subsequent child code
2. Constructive criticism gives feedback and sets boundaries as a result of previous behaviour coded, and is not coded as criticism
3. For condemnation of the act code **CR**
4. For general adverse comment on the actor (child) code **SCR** (stinging criticism). Anything which belittles the child, devalues his needs, or undermines his self esteem would be **SCR**.
5. In addition to the content of the criticism code **HOS** if the comment is hostile. Hostility is conveyed by tone, context, demeanour and/or intensity.
6. Using sibling to undermine child is an **SCR**.
7. Use unsupport, not **CR** where child is asked to take responsibility for distress or protests without support or help.

Examples

1. Child pulls cat's tail
    a. Mother: It's naught to hurt the cat
    b. Mother: That's cruel **CR**
    c. Mother: You're a vicious boy **SCR**

2. Child spills juice
    a. Mother: You're not watching what you are doing
    b. Mother: That's silly **CR**

c. Mother: You would! (nasty tone)

Why are you so messy? **SCR**

3. Child is whining

   a. Mother: I've told you to shut up **INS/HOS**

   b. Mother: You've already got it in for me today **INSCR/HOS**

   c. Sib (Stacey) hits him

   Mother: That's right Stacey, you hit him (laughs) **UNSUP**

4. Child says mouth is hurting, mother inspects it and says

   Mother: You're making it up **UNSUP**

Table 2. Description of Codes for Boss Version of MPA

Anticipation (Positive) FACCT		Warmth and Stim Pos MAP APV MF Pos Affect ML-CF MA	
Anticipation (Negative) Lapsed – MO fails to set up and complains		Warmth and Stim Neg Neg Affect Cr Scr Rej Hos DA (Discordant between M + C)	
Autonomy Positive CH Mon ENC EN PR-MF Req-Mnc/EXP (Impr)		Distress Positive Distress "mopped up"	
Autonomy Negative Pr-MIG PR-MF		Distress Negative Precip M neg	

		Unsup No of sequences Length of sequences	
Co-operation Positive Req-SC-CC-MC (any order) Neg MC CC SC + Improver		Miscellaneous (Bad timing) X (Inconsistent) Y (Developmentally Inappropriate) Z Emotional inconsistency (Pos. code + neg code) EI	
Co-operation Negative Req-MIG Req – M Neg box completed Thr FC			

FIG 1 Example of Mini-Sequence Structure (Responsivity)

Time Interval	Time Sampling	Description of Interactive Behaviour
0 – 10 secs	Proximity 0	Parent and child on sofa together
10 – 20	Involvement 2	Looking at picture of cow in book
	Joint activity	
20 – 30	**Mini-sequence begins**	
	Child Link (CL)	Child pointing, “Look, it’s a cow”
30 – 40	**Mother** Follow (MF)	“Yes, it says Mooo” mother responds
40 – 50	**Child** Follow (CF+)	Child excitedly imitates “Moo, moo, moo”
50 – 60 secs	Mutual Affect (MA)	Parent and child laugh together
	Mini-sequence ends	

1 min -	Time Sampling	
0 – 10	Joint Activity (prox 0; inv 2)	Parent and Child continue looking at the book and sitting together

FIG 2 Example of Mini-Sequences with Embedded Structure

Time Interval	Time Sampling	Description of Interactive Behaviour
0 – 10 Secs	Mini-sequence begins (Co-operation)	
	Parent seeks Co-operation (SC)	"Do you want to put your dolly to bed?"
10 – 20	**Child** non Co-operates (PR)	Child whimpers holding onto doll
	Mini-sequence begins (Autonomy)	
20 – 30	**Parent** follows protest (MF)	"Okay, we can wait a bit."
30 – 40	Parent monitors child's play (MON)	Parent watches child and waits
	Mini-sequence ends (Autonomy)	

	Mini-sequence continues (Co-operation)	
40 – 50	**Parent** seeks co-operation (SC)	"Let's leave dolly in your chair."
	Child complies (CC)	Child agrees and they leave the room.
	Mini-sequence ends (co-operation)	

Figure 3: Structure of MPA Dimensions: Principal Components Analysis (Total variance accounted for 64%) N – 69

FACTOR 1 (eigen = 7.12)	**FACTOR 2** (eigen = 5.52)	**FACTOR 3** (eigen = 3.05)
Parental hostility	Seeks co-operation+	Time spent in control
Parent precipitates child distress	Facilitate before care-taking (well-timed)	Negative and/or consistent parental handling during control and conflict episodes
No. of bouts of child distress and long bouts of distress	Parent anticipates specific duties in caretaking routines	Child makes requests
Parent responds to child distress in negative, unsupportive ways	"Meshing" – positive responsivity (M links and child follows)	Child makes cognitive contribution to social exchanges with parent which are not acknowledged
Parental criticism	Having fun together while in	

	caretaking	
Parent increases intensity of negative responses during control and conflict		

Table 3. Example of Coded Behaviour on an MPA Dimension (Anticipation) across Child Age and Development

FACILITATE (FAC)

Definition: Mother makes activities that involve her and the child (either independently or together) easier for or more acceptable to the child.

4 months	mother jiggles bottle gently when infant stops sucking
12 months	parent plays “airplane” with the spoon and then presents to child with food on it
28 months	Mother: “Time for the hair” – as child sits in bath Mother: “You hold the shampoo. If we don’t hold on it will be all messy”

Table 4: Mean frequency of interactive exchanges per hour for treated and untreated mother – child dyads at baseline and 8 months later

	Baseline	**Follow Up**
Anticipation		
(positive Anticipation FAC/CT)		
Treated (n=20)	7.5	7.0
Untreated (n=21)	7.3	5.5
Responsivity		
(Mother link, child follow, having fun together, positive affect)		
Treated	52	66
Untreated	45	42
(Hostility, criticism, poor timing)		
Treated	8.3	6
Untreated	10.7	10.7
Autonomy		
(positive aspects of autonomy)		
Treated	13.9	22
Untreated	15.1	17.3
(negative autonomy PR-NEG)		

Treated	3.15	1.7
Untreated	4.6	4.6

Co-operation

(seeks co-operation plus improver, child requests met)

Treated	12.6	17.1
Untreated	12.0	13.2

Table 7. Baseline mean frequency and Standard Deviations for mini-sequences on Dimensions of the MPA scored for one hour's home observation on 56 inner-city, high psychosocial risk, and families with the index child under five years of age.

	Mean	SD
Anticipation		
Facilitate before caretake	8.5	6.6
Autonomy		
Positive Autonomy items accepted by child (check, encourage, enable mother, follow, monitor, negotiate)	13.9	10.5
Child protest followed by parent's negativity	3.6	5.8
Child Protest	12.8	12.9

Responsivity		
Parental positive affect (behavioural, gestural & tone and mutual effect)	28.6	18.9
“Meshing” (parent link with child follow)	7.1	9.1
Having fun together (count per 10 second interval)	20.6	24.3
Parent negativity (host, poor timing, crit, unsupport)	14.3	11.2
Co-operation		
Parent seeks co-operation	22.3	16.3
Parent seeks co-operation accompanied by positive affect, persuade, facilitate	8.0	7.0
Child request met by parent	4.3	5.0
Distress		
Number of distress bouts	5.3	4.1
Control and Conflict		
Number of control episodes	6.7	6.0

Table 9: Association of observations of interactive style between parent and child and concurrent, independent assessments of the psychiatric status and psychological well-being of children under five.

Interactive Style (counts per hour)	Children no problems	3+ problems t	N=69 (2 tail)	P
Anticipation (FAC before caretake challenge)	4.14	2.42	2.87	0.01
Autonomy (Parent gives autonomy in positive way and child responds)	25.96	14.81	2.54	0.01
Responsivity (Parent Link-child follow	11.14	4.61	2.71	0.01
Having fun in caretaking	27.89	10.5	2.41	0.02
Parental positive affect	27.39	15.48	2.41	0.02
Co-operation (seeks co-operation+)	7.52	3.43	2.22	0.03

Table 10. Observation measures of mother-child interaction

Video Coding (Rates per minute)	Before	After (4 months)	Follow-up (1 year)
Autonomy +ve	0.41	0.77	0.65
Autonomy -ve	0.06	0	0
Co-operation +ve	0.76	0.48	0.75
Co-operation -ve	0.41	0.11	0
Anticipation +ve	0.20	0.52	0.20
Anticipation -ve	0	0	0
Warmth and Stimulation +ve	0.88	1.37	1.75
Warmth and Stimulation -ve	0.52	0.33	0.15
Distress (Mopped up)	0.06	0	0.25
Distress -ve	0.17	0	0
Miscellaneous -ve	0.11	0.18	0
Time in Control	1.17 mins	7.17 mins	0.33 mins
Total control sequences	3	15	1
Positive Outcome	2	13	1
Negative Outcome	1	2	0

Table 10. Standardised measures of development and behaviour

	Before Group	End of Group	One year follow-up
Daily Hassles			
* Frequency	46	39	34
* Intensity	49	37	34
* Challenging behaviour	20	17	16
*Parenting tasks	15	15	09
Vineland Adaptive Behaviour Scales			
* Communication (percentile)	07	-	39
* Daily Living Skills (percentile)	03	-	27
* Socialisation (percentile)	06	-	04
* Motor Skills (percentile)	23	-	02
Richman & Graham Child Behaviour Rating Scale	21	20	16

Table 11. Counted interactions pre- and post intervention

	Pre-group Mean Frequency (SD)	Post-group Mean Frequency (SD)	I-tail sign matched t-test
Facilitate before caretake	3.9 (6.1)	4.2 (4.9)	NS
Positive affect	23.1 (31.2)	33.0 (33.3)	P 0.05
Negative affect	20.2 (20.0)	4.1 (3.1)	P 0.01
Mother Link - Child Follow	3.1 (3.2)	6.8 (6.3)	P 0.05
Autonomy	6.9 (6.0)	11.7 (10.5)	P 0.05

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Appendix 6

ENGAGING OR RESPONDING BEHAVIOUR Mother Link ML

Definition Mother expands the child's or her own activity in such a way as to enlarge the child's world of understanding. A link must relate to the immediately preceding topic or activity which child is attending to.

Subcode **WL** – relating directly to the child's experience

Guidelines

1. Does require a subsequent child code. Code response (**CF, CNF, CIG**).

2. The child's cognitive level is important in determining when to code **ML** – if mother and child are looking in a mirror and mother says "bye-bye" and ducks away from and back to a mirror, code **ML** for an 8 month old, but not for a 30 month old
3. A comment linked to the child (example 24 months) or to his past or future experience (example 32 months) is coded **WL**.
4. Each time mother gives information or tables do not code **ML**. When the content is beyond what the child is immediately aware of but within his cognitive grasp, code **ML** (example 44 months). Each <u>new</u> dimension introduced would be coded (example 32 months, 2).
5. If similar statements are repeated, do <u>not</u> recode (example 40 months).
6. When mother presents some caretaking object or procedure so that the child can learn from it code **ML** (example 12 months).
7. When mother gives a new or extended meaning to an object or activity or raises the activity to an imaginative level, code **ML** (examples 8/28/36 months).
8. Counting is often used before an activity (turning an infant over) or during an activity (carrying a child upstairs). Code **FAC**. Do not code as **ML** unless the concept of numbering is clearly being used.

Examples

4 months	Mother crinkles up a piece of paper into a paper ball and tosses it up and down in front of infant if infant looking at ball mother holds the ball close to the infant's ear and squeezes it so it makes a crackling sound	**ML.CF**
8 months	Mother is looking in the mirror with child: That's Gordon!	**WL-CF**
12 months	Mother starts to put cream on child's skin a) mother puts some cream (not rubbing it in) on the child's	**CT**

	hand. Child rubs in b) child tries to wriggle away mother puts some cream on the child's hand, child rubs in	**ML** **R** **FAC/ML**
20 months	Mother turns on the water in the tub, child watches with interest: See how the water makes bubbles Child watches	**ML** **CF**
24 months	Mother: This is brown like your hair Child: hair	**WL** **CF**
28 months	1 – Child serves tea to the mother Mother: Did you make the cake yourself or buy it at the store? Child: no reply 2 – Child is playing with a piece of toast: It's a horse Child eats his toast Mother: the horse is going down into your belly (later when the mother refers to toast animals going down to the Belly do not recode **ML** Child laughs	 **ML** **CL** **MF/ML** **CF+**
32 months	1 – Mother: That is like the zebra you saw in the zoo last summer Child: No it isn't 2 – Mother and child are doing a jigsaw puzzle Mother: Is the shape right? You need a straight piece for the edge Does the colour match the colour of the other piece? Look at this and look at this, are they the same?	**WL** **CF** **ML** **ML** **ML**
36 months	1 – Mother and child are building with Lego Mother: Will anyone live in your house? Child: Me	 **ML** **CF**

40 months	Mother starts to read a book to child Mother: What do you think the doggie is going to do? (Subsequent questions about what characters are going would not be coded. A question about how a character feels would be coded). Child barks	 **ML** **CF**
44 months	1 – Child pulls back from the bath water Mother: It's not hot Mother: I'll put my hand in to check if it's hot Mother: I put cold water in with the hot and cold and hot together make warm Child: no response 2 – Mother wash up now Child: No a) Mother: You can't have lunch with dirty hands, can you b) Mother: Look at all that dirt. It will get on your food and then into your tummy and then how would you feel Child: washes hands	 **MF** **FAC** **ML** **CNF** **SC** **NC** **FAC** **ML/FAC** **CF/CC**

Appendix 7

Improving the Quality of Family Support

Costs Methodology

Research funded by the Department of Health set out to evaluate a method to facilitate good parenting in families with children aged under five who are on the Child Protection Register, or where there is serious concern about parenting. The aim was to evaluate the implementation of

the intervention package in Scotland and the South East of England, using index and control groups assessed pre- and post the intervention phase and at a one year follow up.

An economic evaluation was undertaken at CEMH as part of the programme of research. Focusing on service use and costs for the children and families taking part in the study, in both England and Scotland, data were examined alongside the process and outcome findings of the main evaluation. The remit of the CEMH researchers was as follows:

- To describe service use and associated costs for individual children and families, during the support programme and in the one-year follow-up period, identifying the resource implications for agencies and individuals;
- To compare the overall and component resource implications between the groups of families, alongside the study's investigation of outcomes;
- To examine the differences in resource implications between families within each group, linking resources to child and family characteristics, needs and outcomes;
- To calculate full and disaggregated costings (by programme) of the family centres taking part in the study;
- To interpret our findings in relation to relevant policy and practice discussions concerning child care and family support;
- To make informed conjectures regarding long-term service and cost implications for children and their families

When calculating the costs of the package of services received by each family participating in the study, we used information which was as specific to individual facilities, or areas of England and Scotland, as was possible. It was particularly important to reflect the cost of services provided by and in the family centres which were the main locus of activity for most of the study families, and where (for index families) the parenting programme was run. As detailed below, a great deal of researcher time was invested in obtaining accurate service description, accounts information and

capital details. Accommodation and living expenses for the families in the study were calculated using local information where possible and, for families who had made use of hospital-based services, were distinguished between Scottish and English hospital costs. Unit costs for peripatetic service professionals were calculated using local details, if these were available. Otherwise, costs were taken from the annual PSSRU publication *The Unit Costs of Health and Social Care 1996*, edited by Netten and Dennett, and regional adjustments were made where applicable.

Calculating the unit costs of family centre services

Information about the costs of providing services within family centres is currently scarce. In part, this may be due to inherent difficulties with any cost centre which operates a multi-faceted service. Such problems include calculating unit costs for a number of distinct services offered by each centre, identifying "hidden" costs and inputs, and combining capital and recurrent expenditure (Bebbington, 1993). In addition, it is probable that each family centre operates in a unique set of circumstances, and that the elements of the service provided reflect local funding priorities, varying levels of deprivation and need, and the availability of other services in the area. Data are unlikely to be generalisable, therefore, although each piece of information contributes towards a broader understanding of the financial implications of providing services within family centres.

The first task was to build up a picture of all service activities being provided by (and in) each of the participating family centres, and to trace the dispersal of the facility's budget. Data were collected by the CEMH researcher during an interview with the manager or project leader. The informant was asked to give details of each service: number of sessions per week, number of places (or anticipated attendance), use of the building's space and resources and (where possible) precise staff involvement.

Facility-specific, disaggregated running costs for recent financial years were requested and analysed, with the help of the informant, during the interview. In order to establish a global picture of the ways in which family centre resources were being used, it was important not to miss services or professionals whose costs, for whatever reason, would not appear in the facility's own budget. Social workers might provide input on a sessional basis, for example, or independent organisations use the building in the evenings or at weekends. Equally crucial was an understanding of expenses which appeared in the family centre's budget, although the items would actually be shared with other organisations or teams within the building.

The running costs attributable to family centre services were broken down into separate categories: staffing costs, maintenance of property, heat and light, equipment and materials, administration, provisions and agency overheads. Staffing costs were of particular interest, since workers' salaries form the greater part of the cost of running any facility. These costs were broken down further into salary, subsistence and training, superannuation and employer's contribution to national insurance. In addition, staff were separated into categories: management, nursery nurses or care staff, cleaning and domestic staff, drivers, caretakers.

We collected full details of the family centre's managing and funding arrangements, its ownership and (if possible) building costs. For new-build facilities, the costs of construction and fitting out the premises were used in order to calculate a capital element. Otherwise, a recent market valuation of the property was used, or an estimate made based on age, size and type of building. The total amount was annuitized at a discount rate of 6 per cent over the expected 60 year life-span of the facility (H.N. Treasury, 1989).

A comprehensive unit cost was calculated for every activity known to take place at family centres. In the smaller family centres, labour was often provided on a voluntary basis and the running costs did not reflect input by people using the centre (for example, mothers supplying snacks for children at lunchtime, or ad hoc arrangements made for the replacement of office furniture).

These “hidden” costs needed to be explored in order to represent the full cost of providing each service. Our cost calculations are therefore based on known expenses taken from accounts information, costs falling to other agencies, and notional amounts representing the opportunity cost of volunteer labour.

In centres with a large budget, a multiplicity of activities, a programme of replacement and refurbishment, and little or no dependence on voluntary contributions, we faced a problem as we attempted to apportion costs between the services provided. Clearly, the more activities over which running costs are spread, the lower the cost of the individual service. This style of costing would be appropriate if we were considering the known budget(s) of a single facility but, as our remit was to build up service packages for the families participating in the study using data which reflected realistic cost components, we needed to find another approach.

In the five Scottish family centres, information about day care was the most detailed because this was the main service provided. A unit cost was reached, based on the number of places offered per session, and number of days per annum the centre was open. We then estimated the percentage of running costs and floor space which would be used by the day care service. Each separately costed element was multiplied by the agreed percentage and then put together as a unit cost for day care.

Once the elements comprising the costs of the day care service had been calculated, every other service operating at the family centre could be costed by including relevant resource components. For example, a two hour mother and toddler session would use the building’s resources, and staff time. It would be appropriate to include an element for domestic staff, because space used would be cleaned afterwards, but a meal would not be provided, so cooking and kitchen staff would not feature.

If the family centre had made it clear that staff involvement in the various activities was as and when necessary, then elements of these professionals' time was brought in. If, however, pre-arranged numbers of staff members were detailed to run a particular service, their involvement was costed by the hour.

In this way we were able to represent a cost per place per hour for each service and reflect the actual elements making up that cost. Naturally, however, it would be unrealistic to attempt to reach a total cost of running the family centre by multiplying each unit cost by the number of units used.

Unit costs (per hour) of family centre services (Scotland)

Service	Hillfoots	Alloa	Langlees	Maddiston	Bo'ness
Day care	£4.33	£4.62	Snoopy £6.42 Paddington £7.85 Unspecified £7.14	Treats for vols £3.96 Vols unqual £4.52 Vols qual £4.70 #	£6.75

Three unit costs were calculated: volunteers receiving treats now and then (the actual arrangement), volunteers costed as unqualified workers and as qualified nursery nurses.

Other services at Hillfoots:

Pre-school session	£3.66	Creche	£3.09
Play centre	£3.09	Listening post	£3.06
After school group	£3.09	Busy hands	£3.06
Toddler group	£3.09	Craft group	£3.06
Drop in	£1.67	Healthy eating	£3.06
Stroke club	£1.81	Young mothers group	£4.77

Arthritis club	£1.81	LALIC*	£4.36
		LALIC creche	£5.86

- Living and learning in Clackmannan. Women back to work, living with babies and toddlers, practical parenting, introduction to child abuse and neglect, pre-school years.

Other services at Alloa:

Parent and toddler group	£3.23
Group work	£6.95
Monday group	£4.31
Monday group crèche	£5.09
Adult education	£4.55
Adult education crèche	£6.05
Women's Aid support group	£3.41

Other services at Langlees:

Parent and toddler group	£4.74
Creche	£4.74
Playgroup	£3.98
Arts and crafts group	£3.90
Creative group	£3.90

Other services at Maddiston:

Parenting skills group	**£4.82**	Computer group	**£10.05**
Parent and toddler group	**£3.89**	Healthy eating	**£2.93**
Drop in	**£3.17**	Adult basic education	**£6.51**
Adult/community education	**£6.87**	Scotvec module in childcare	**£5.50**

Other services at Bo'ness:

Creche	Vol lunch and travel £5.36 Vol unqual £6.07 Vol qual £6.63
Drop in	£5.12
Groups for adults (not Mellow Parenting)	£6.57
After school club	£6.96

Unlike the family centres in Scotland, the two English family centres used by families acting as controls did not offer full-time day care, so it was not possible to cost their services in the same way. We understood that the budget (after one or two adjustments to allow for shared us of buildings and staff working part-time in other places) reflected a reasonable approximation of the cost of running all operational services. However, we were faced with the task of dividing up the running costs between individual activities in a way that reflected an equitable division of the facility's resources. All costs associated with staffing were separated from non-staffing costs. Staff involvement in individual services was costed by the hour (using salary and on-cost information and dividing staff numbers by number of places or average number of attenders). An element was added to allow for administrative, domestic and managerial staff.

When considering non-staffing costs, we looked at the area of the building taken up by each activity, calculated the number of hours per annum each service was operating and the percentage of total space it used. We were then able to divide the cost of individual items of expenditure between service activities and to build up individual unit costs.

Unit costs (per hour) of family centre services (Brighton)

Hillview:

Activity groups*	£6.63
Crèche accompanying activity group. Also known as children's group	£6.90
Community morning (drop-in)	£5.60 for mother and child unit
After school club	£3.72
Parenting support	£8.07
Bilingual support club	£11.05
Summer play scheme	£0.70

*Art, confidence building and cookery, for example

Chimneys:

Crèche	£5.65	Parent support	£13.95
Relaxation	£4.53	Drop in	£4.14
Motherhood matters	£4.74	Young women's group	£6.37
Getting ready for school	£11.25	Art and drama for 7 - 11 year olds	£2.67
Cookery class	£6.61	Community lunch	£2.67 per meal
Positive parenting	£6.37		

Costing the Mellow Parenting programme in Scotland

The intervention was run nine times during the study period, at four different locations. Our first task was to investigate every element which went to make up the total cost of running the programme. By doing so, we were in a position to reflect actual arrangements. We were also

able to use these data in order to create hypothetical situations in which the programme might be run in the future.

Unit costs were calculated for each of the service professionals who had been involved in each of the groups. This was done using facility-specific accounts information where possible. With the exception of the independent psychologist who set up the programme, a health visitor and a health educator, paid professionals were all employed by the family centres. Volunteer labour was costed at the rate volunteers were paid for running the crèche while the programme was taking place (£5 per hour). Obviously the cost of the intervention would be greater if the volunteers were paid at realistic rates. [This is something we can test as part of the analyses, since it would be easy to substitute amounts.]

Because unit costs data include a capital element, facility running costs and agency overheads as well as salary and on-costs, no amount was added for running the programme at particular locations. As well as staff costs for group sessions, various other elements needed to be included. Every family recruited to the study (intervention and control) was filmed at each of the three interview points, so an element was calculated to include camcorder and video tapes, and the research assistant's filming time and travel costs.

Sixteen families were usually seen in order to recruit the eight who eventually took part in the group. Each of these assessments took one hour and a decision was made based on a single visit. Travel time and travel costs have been taken into account.

Before each group began, there would be two introductory staff meetings at the location for all staff. Time spent travelling to these meetings was included for the professionals not based at that particular family centre. In additions, the psychologist's preparation time and secretarial time compiling a manual and the materials were brought in. While the programme was running, there

would be one hour per week for training and supervision. A nominal amount was also included for the provision of lunch for staff, parents and children during each weekly session.

The total cost of running the programme with varying staffing arrangements and at four distinct locations may be represented in several ways. Here we report three different approaches:

- Cost envisaged at the outset. The average cost per family enrolled equals the total cost divided by initial number of families recruited.
- Cost per family who completed the programme. The total cost is divided only by the number of families who stayed in the programme.
- Unit cost of each group. The total cost is divided by the total number of attendances during the programme.

These three costs are shown in the table below;

The costs of running the Mellow Parenting programme in Scotland

Centre and group number	Average cost per family enrolled at outset	Average cost per family which completed	Unit cost of group (total divided by number of attendances)
Alloa 1	£2,265.19	£2,265.19	£161.80
Alloa 2	£1,074.84	2,418.39	£144.38
Alloa 3	£1,352.23	£1,893.13	£126.21
Alloa 6	£1,161.57	£2,710.34	£133.30
Alloa 7	£746.85	£1,120.27	£77.26
Langlees 4	£881.00	£1,174.67	£81.01

Langlees 8	£801.33	£1,030.28	£70.02
Bo'ness 5	£1,017.44	£1,308.13	£87.21
Kelty 9	£1,582.90	£2,770.08	£197.86

Costing the parenting programme in London and filming the South of England control group

For the purposes of the evaluation, the programme was run at only one location in England, the Bloomfield Centre at Guy's Hospital in London. Unit costs were calculated for each of the professionals involved in running the programme. We used Guy's and St Thomas's Medical and Dental School pay scales (mid-scale salary) and added an appropriate percentage for on-costs, overheads and capital. Because each unit cost includes an element for the use and running of a building, no separate calculations were necessary for Bloomfield Centre space and resources. Details relevant to 1995-96 were used and all costs shown at 1995-96 price levels.

Thirty families were normally assessed in order to recruit the four who would eventually take part. The selection process involved three one-hour sessions with each family, since staff exercised caution about offering the group. Prospective participants were assessed by a Grade G nurse, an occupational therapist or a trainee registrar. The lengthy selection process is an important factor in the running of the programme at the Bloomfield Centre and is reflected in the unit cost for each group.

Visits the researcher made to film the families taking part in the evaluation at home lasted approximately 30 minutes: considerably shorter than the Scottish average. Twenty minutes' travel time and appropriate travel costs have been added to this and three visits have been costed in for all study families, because the intention was that they should all be filmed at each of the interview points.

There was no introductory staff meeting for staff at the Bloomfield Centre before the running of each group, and the length of group sessions includes time for preparation and debriefing. There was no training or supervision of staff as part of the programme. Staff were not required to travel away from their own base to run the programme, so staff travel costs have not been included in the costs of running each group. A standard pre-printed pack which had been put together for the programme in Scotland was used to structure the sessions, so the same cost has been used. The amount estimated as the cost of providing each person with a meal in the Scottish centres was used here with an appropriate regional multiplier. As with Scotland, the full cost of running the programme is represented in three alternative ways.

The costs of running the parenting programme at the Bloomfield Centre, London

Group Number	Average cost per family enrolled at outset	Average cost per family completing programme	Unit cost of group (total divided by number of attendances)
1	£2,422.49	£4,844.98	£387.60
2	£1,973.45	£2,631.27	£179.40
3	£2,516.71	£5,033.42	£287.62
4	£2,186.56	£2,186.56	£174.93
5	£1,877.43	£1,877.43	£202.97
6	£2,539.23	£2,539.23	£230.84
7	£2,058.17	£2,744.23	£235.22
8	£2,244.93	£2,993.24	£242.70
9	£2,130.45	£2,130.45	£189.37
10	£1,882.00	£1,882.00	£179.24

Use of other services

In order to examine the impact of the parenting programme on subsequent service uptake, we needed to describe and cost all the components which made up the service package received by each of the study families while they were going through the programme, and during the year which followed. For this we relied on data collected at interview with the mothers. It was not possible, in most cases, to collect full details relating to all family members, but we have a picture of service contacts involving the mother and index child and, usually, receipt of high cost services (such as hospital inpatient and prison) by other family members.

Hospital services may be expected to make up a large part of any service package in which they occur. For this reason, we were anxious to calculate costs which were hospital- and specialty-specific where possible. Scottish unit costs data were taken from *Scottish Health Service Costs*, published annually by the National Health Service in Scotland. For English hospitals, national hospital specialty costs for 1994-95 were used (uprated to 1995-96 price levels using the Hospital and Community Health Services pay and price index). These figures were calculated from finance central returns from NHS Trusts in England.

Hospitals – Scotland

Key:

MI – Medical illness
O – Orthopaedics
P – Paediatrics
M – Medical
GS – General Surgery
G – Gynaecology
ITU – Intensive Therapy Unit
Ob – Obstetrics
ENT – Ear, Nose & Throat
SCB – Special Care Baby Unit

Name of Hospital	Cost per inpatient day	Cost per outpatient appointment	Cost per day patient attendance	Cost per A&E appointment
Clackmannan	MI = 155.82		64.66	
Falkirk Royal	GS = 311.64 O = 241.68 M = 202.46 P = 233.20 G = 461.10 Ob = 251.22 SCB = 571.34	21.20	154.76	39.22
Stirling Royal	GS = 183.38 O = 149.46 ENT = 216.24 M = 137.80 P = 220.48 G = 255.46 Ob = 209.88 SCB = 373.12 ITU = 541.66	53.00	214.12	29.68

Yorkhill	O = 157.94 ENT = 134.62 M = 258.64 P = 330.72 ITU = 1164.94 MI (child) = 763.20	38.16	118.72	38.16
Edinburgh	ENT = 422.94 P = 483.36	41.34	205.64	64.66
Southern General	GS = 248.04 O = 231.08 M = 148.40 G = 293.62 ITU = 450.50	34.98	44.52	43.46
Bellsdyke	MI = 109.18	22.26	59.36	
St Margarets	149.46	18.02	43.46	73.14

Hospitals – England

Specialty	Inpatient Day	Outpatient Attendance	Day Hospital Attendance
Paediatrics	223.86	73.20	57.30
Cardiology	342.77	89.17	
General Surgery	228.22	51.35	
Orthopaedics	215.22	52.16	
Ear, Nose & Throat	319.48	50.00	
Ophthalmology	409.05	41.17	

Gynaecology	258.35	51.41	
Cardiothoracic	430.53	114.31	
Paediatric Surgery	481.30	82.62	
Obstetrics	254.44	54.49	
Learning Disability	125.17	97.67	32.14
Mental illness	126.78	77.45	46.51
Child & Adolescent Psychiatry	241.66	136.48	132.13
Psychotherapy	159.65	101.02	

Accident and emergency attendance = £38.57

Generic

Inpatient day = £187.00

Outpatient attendance = £57.00

Day hospital attendance = £55.00

Community–based services. Every effort was made to obtain relevant annual reports and accounts information, which were used to calculate unit costs for individual services and service professionals. If such details were not obtainable, costs were taken from the *Unit Costs of Health and Social Care 1996,* compiled by Netten and Dennett and published by the PSSRU.

Most of the index children attended nursery school or received day care within a family centre during the 14 or 16 weeks of the programme, and started at primary school during the year's follow-up period. We did not cost mainstream schooling, although the input of service professionals other than teachers within schools (educational psychologists, and school doctors, for example) was costed.

Unit costs for non-hospital and non-family centre services

Service	London	SE England	Central Scotland & Fife
Residential care	£198.76 per day	£156.14 per day	£156.14 per day
Foster care	£235.20 per child per week[1]	£160 per child per week	£160 per child per week
Childminding	£2.50 per hour	£2.00 per hour	£2.00 per hour
Nursery school	£2.25 per hour	£1.89 per hour	£1.22 per hour (Central region) £2.63 per hour (Fife)
Playgroup	£2.25 per hour	£1.89 per hour	£1.22 per hour
Nursery	£2.25 per hour	£1.89 per hour	£7.05 per hour
Special needs nursery or play group	£11.15 per hour	£9.83 per hour	-
Outings	£14.18 per day	£12.22 per day	£12.22
Holiday play schemes	£0.81 per hour	£0.70 per hour	£0.70 per hour
Teacher	£24.12 per hour	£21.80 per hour	-
Adult education	£6.03 per hour	£4.36 per hour	£4.36 per hour
Marriage guidance	£54.61 per hourly session	£47.39 per hourly session	£47.39 per hourly session
Brook Advice Centre	£33.01 per contact	-	-
Senior Registrar	£20.90 per hour	-	-
General Practitioner	£9.67 per surgery appointment	£8.00 per surgery appointment	£8.00 per surgery appointment

Clinical / Educational Psychologist	£28.37 per hour	£24 per hour	£24 per hour
School Doctor	£1.05 per minute	£0.86 per minute	£0.86 per minute
Community Medical Officer	£1.05 per minute	£0.86 per minute	£0.86 per minute
Community Psychiatric Nurse	£19.49 per hour	£17 per hour	£17 per hour
Day Unit Sister	£19.49 per hour	-	-
Health Visitor	£19.07 per hour	£16 per hour	£16 per hour
Support Worker	£11.14 per hour	£9.43 per hour	£9.43 per hour
Speech Therapist	£20.35 per hour	£18 per hour	£18 per hour
Dentist	£9.35 per appointment	£7.66 per appointment	£7.66 per appointment
Optician	£13.32 per sight test	£11.58 per sight test	£11.58 per sight test
Occupational Therapist	£18.40 per hour	£16 per hour	£16 per hour
Social Worker	£17.28 per hour	£16 per hour	£16 per hour
Crossroads Care Attendant	-	-	£7.70 per hour
Solicitor	£99.36 per hour	£84.20 per hour	£84.20 per hour
Court Case	£115.30 per court appearance	£94.51 per court appearance	£94.51 per court appearance
Prison[2]	£615.68 per week	£615.68 per week	£615.68 per week
Community Service	£12.00 per hour served	£10.26 per hour served	£13.59 per hour served
Police Officer	£21.01 per hour	£18.11 per hour	£18.74 per hour

Court Welfare Officer	£18.20 per hour	£15.69 per hour	-
Probation Officer	£18.93 per hour	£16.32 per hour	£16.32 per hour
Citizens Advice Bureau	£18.20 per hour	£15.69 per hour	£15.69 per hour
Alcoholics Anonymous	£10.85 per person per meeting	£10.85 per person per meeting	£10.85 per person per meeting
Leisure Activities (e.g. yoga, keep fit)	£3.32 per hour	£2.81 per hour	£2.81 per hour

Notes

1 Includes boarding out and admin expenses only

2 Prison costs are not region or facility specific: details were not available

Costing accommodation and living expenses

As we have shown in previous research, costs associated with accommodation normally comprise of the greatest part of the total cost of any service package (refs). It is normally important to focus on accommodation arrangements, therefore, in order to distinguish between the relative costs of domestic and supported housing, and to tease out factors affecting costs, such as staffing levels or capital building programmes. The families who took part in this evaluation were almost all living in domestic accommodation, however, so we would not expect to find great variations between individual arrangements. In additions, it is unlikely that variations between types of tenure and household income levels would have a direct relationship to the intervention itself. Accommodation costs and living expenses have been excluded, therefore, from much of our analyses. However, some calculation was necessary in order to include this element where we needed it. More specifically, most families were known to be subsisting on low incomes, which would be likely to exacerbate social and developmental problems, so we focus here particularly on the calculation of household income and expenditure.

Most families lived in local authority rented property. To calculate the capital element of weekly costs, we needed data that would allow us to estimate the total cost of providing housing: amounts met by both the local authority housing department and the tenant's household. Where possible, we accessed details of average capital valuations for different sizes of property in specific local authorities. We also requested annual figures for the supervision of and repairs to council properties and calculated the cost per household per week. If this information was not available, national data relating to the costs of management and maintenance (CIPFA's *Rating Review*) were used. These details were combined with average prices of property sold to local authority tenants *(Housing and Construction Statistics 1983-93)*. Because of discounts offered to tenants, such prices would not reflect the true market value of the property. An amount estimated by the Housing Data and Statistics Division at the Department of the Environment as the average percentage discount on council house sales was therefore added. Once these calculations had been made, we used figures across the individual regions of England and Scotland.

In order to estimate weekly living expenses we should, ideally, be aware of the composition of each household. The families taking part in the evaluation generally lived in arrangements which changed a good deal during the study period, so it was neither practical nor helpful to fix on a situation that existed at any one point in time. The absence of detail (or difficulty obtaining information) mattered less than might have been the case, because we did know from the interview schedule that income was usually low (most families were at least partly reliant on social security benefits).

Some information on household income had often been recorded, as had the occupation of adults in the household. We also had details about social security benefits received, if appropriate. This made it possible for us to compare the study families with national findings reported by the Family Expenditure Survey (CSO, Family Spending 1994-95). Table 1 quotes expenditure rather than income information and, for the study families, we have no details on expenditure.

Table 1: Household expenditure by economic activity status of head of household (FES)

Category	Average Household Size	Net Housing Per Week £	Average weekly expend (94-95 prices uprated to 95-96 levels) £
Full-time (unspecified)	2.9	69.56	388.74
Part-time	2.3	42.78	251.35
Self-employed	2.9	66.49	411.40
Unemployed	2.7	23.78	180.20
Professional	2.8	84.43	467.37
Employers & Managers	2.9	88.69	466.38
Intermediate non-manual	2.5	63.40	351.13
Junior non-manual	2.4	55.94	293.74
Skilled manual	3.1	51.01	325.63
Semi-skilled manual	2.7	44.01	257.56
Unskilled manual	2.8	30.40	213.30

Such figures are invariably higher than *income* reported by the study families; in cases where actual amounts were quoted. These amounts may be broken down as follows:

- Twenty-five families in receipt of DSS benefits and with no other income: mean = £106.50 per week (range = £68.61 - £151.55).
- Three families with part-time work and DSS benefits: mean = £133.12 per week
- One head of household at managerial status: income exceeding £200.

- Four families headed by a skilled or semi-skilled manual worker: mean = £223.23 per week
- Student (one household) = £162.82

These data indicate that expenditure amounts in Table 1 do not reflect the income levels of the families participating in this study. However, FES total expenditure includes rent payments. Most of the study families who rely on DSS benefits would receive housing benefit, and this amount would not be included in household income figures. In addition, mothers may be receiving maintenance payments, but we have no details about such arrangements. Child benefit receipt for siblings of the index child may also be missing. So, where income amounts *have* been quoted, it is unlikely that they represent the full picture.

Both the English boroughs which participated in the study reported that more than 70 per cent of all households in local authority rented properties had income not exceeding £150 per week, and it is reasonable to assume that most of the study families came within this category. We examined the gross household income of 6,853 households (33 per cent of which included one or more children) by household tenure arrangement (detailed by the CSO) and results were as follows:

Table 2: Gross household income by household tenure (1995 – 96 price levels)

Tenure of Dwelling	Weekly Household Income (gross)
Local authority rented (unfurnished)	176.83
Housing association rented (unfurnished)	167.91
Other rented (unfurnished)	295.53
Rented (furnished)	318.40
Owner occupied	459.41

We also looked at FES data for average income for two types of household.

Table 3: Gross income per week by quintile

Income Quintiles	One Adult Household with Children	Two Adult Household with Children
Lowest twenty per cent	Below £87	Below £263
Second quintile group	Below £105	Below £388
Third quintile group	Below £143	Below £504
Fourth quintile group	Below £224	Below £663
Highest twenty per cent	Above £224	Above £663

Table 3 indicates the disparity between the average income of households headed by one and two adults. Although many of the women taking part in the study had cohabiting partners (at least some of the time), it was more usual to find one adult in study families. We may feel confident in using FES data.

Relying on FES data solves a few problems. We cannot tell from the interviews how much rent people are paying. FES net housing amounts include water rates, insurance and repairs and maintenance carried out by household members. And council tax. This is important – we cannot obtain an estimate for council tax payments elsewhere.

At the one year follow-up point we had income information from 59 study families at the time I had to make a decision about accommodation and living expenses. Mean was £151 per week, median £110. As noted earlier, we know that the income information we have does not give a picture of the total cost of accommodation and the means of meeting other living expenses. However, most study families are known to be reliant on state benefits, so we need to reflect low income.

We had no details about cohabiting partners, but knew that only seven families (out of 88) had more than three children (maximum 5). Families with most children did not appear to a higher income. FES data for all one adult families with children by gross income group quoted on all household figure of weekly expenditure (excluding net housing) of £141.23. If we take an average for the lowest 20 per cent of one and two adults with children, weekly expenditure less housing is £140.56. Mean is £140.59, so I am using £141 per week for living expenses. This is justified further in methodology. It is, of course likely that there would be some regional variations, but I'm not worrying too much about them. It is in the capital element that a regional variation would be felt. Capital calculations as below;

Scotland – owner occupied

One bedroom = £52.77 + £141 = £193.77 per week

Two bedroom = £59.67 + £141 = £200.67 per week

Three bedroom = £67.94 + £141 = £208.94 per week

Four bedroom = £109.21 + £141 = £250.21 per week

Privately rented

One bedroom = £84.43 + £141 = £225.43 per week

Two bedroom = £95.47 + £141 = £236.47 per week

Three bedroom = £108.70 + £141 = £249.70 per week

Local authority / Housing association

All property = £60.00 + £141 = £201.00 per week

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Brighton – owner occupied

One bedroom = £38.28 + £141 = £179.28 per week

Two bedroom = £67.25 + £141 = £208.25 per week

Three bedroom = £79.04 + £141 = £220.04 per week

Four bedroom = £155.29 + £141 = £296.29 per week

Privately rented

One bedroom = £83.00 + £141 = £224.00 per week

Two bedroom = £115.00 + £141 = £256.00 per week

Three bedroom = £130.00 + £141 = £271.00 per week

Local authority / Housing association

All property = £102.28 + £141 = £243.28 per week

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London – owner occupied

One bedroom = £63.07 + £141 = £204.07 per week

Two bedroom = £112.67 + £141 = £253.67 per week

Three bedroom = £119.72 + £141 = £260.72 per week

Four bedroom = £204.26 + £141 = £345.26 per week

Privately rented

One bedroom = £122.09 + £141 = £263.09 per week

Two bedroom = £152.23 + £141 = £293.23 per week

Three bedroom = £173.78 + £141 + £314.78 per week

Local authority / Housing association

All property = £125.65 + £141 = £266.65 per week

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