Bobath Scotland is a tertiary referral centre providing therapy for children with cerebral palsy. The staff wanted to find a standardised tool that could assess parents’ views regarding the care that their children had received. The aim of this study was to conduct a trial using a recently developed tool, the Measure of Processes of Care (MPOC) (King et al 1995), to investigate families’ perceptions of the care received at Bobath Scotland and the extent to which they considered it ‘family friendly’.

The MPOC questionnaire was sent to the families who attended Bobath Scotland during a 12-month period. The MPOC consists of five scales: enabling and partnership; general information; specific information; coordinated and comprehensive care; and respectful and supportive care. Items are scored on a 7-point scale, from the behaviour ‘never’ occurs (1) to ‘occurs to a great extent’ (7). Mean scores are calculated for each scale.

Questionnaires were sent to 114 families and 72 were returned completed (63%). The mean scale scores were as follows: enabling and partnership, 6.3 (SD 0.64); general information, 4.3 (SD 1.69); specific information, 6.5 (SD 0.75); coordinated and comprehensive care, 6.3 (SD 0.75); and respectful and supportive care, 6.5 (SD 0.60).

The overall mean scale scores were high, demonstrating that families were satisfied with their care. The MPOC proved an appropriate tool to investigate the perceptions of care of families attending a paediatric centre.

Using the Measure of Processes of Care to Assess Parents’ Views of a Paediatric Therapy Service

Virginia Knox and Shona Menzies

Introduction

Bobath Scotland in Glasgow is a tertiary referral centre, which provides specialist therapy for children with cerebral palsy (0-18 years) in 2-week or 6-week blocks at an average of 6-monthly intervals. It is recognised that the behaviour and communication of health professionals with parents, and the way in which services are organised, may directly affect parental wellbeing (Kelley et al 1991, Larssen 2000, O’Neil et al 2001, Law et al 2003) and also enhance developmental progress (Law et al 1998) and psychological adjustment (Stein and Jessop 1991) in children. The centre strives to provide services of the highest standard and, previously, questionnaires have been designed in-house to investigate service users’ views on a variety of topics. The therapy staff wanted to find a more objective standardised tool that might be suitable for assessing service delivery, in terms of parental views regarding the care that they received and to what extent that care was ‘family friendly’.

A family-centred or family-friendly approach to care suggests that there is collaboration between therapists and the family. This would include areas such as the assessment of the child’s needs, the setting of joint goals and interventions that reflect the family’s needs and are significant to them, joint decision making, and services being flexible and adaptable to the family (Hanna and Rodger 2002). A core value of the Bobath concept is the importance of parents’ involvement in voicing their main concerns and priorities about their child, setting goals, and enabling them to carry out therapeutic activities within their usual daily routines with their child through training and education (Mayston 1992, 2001). Information sharing and empowering parents are key elements within a family-centred approach (King et al 2004).

A family-centred approach recognises and respects that each family is unique (Edwards et al 2003) and has differences in cultures and ways of coping and that the family, unlike the therapist, is the constant in the child’s life (Shelton and Smith Stepanek 1995). A family-centred approach includes caring for the needs of family members as well as those of the child and making adjustments to the health care environment to allow families to operate in as normal a way as possible (Franck and Callery 2004). Family-centred care suggests that families are active participants in the care of their child, although this may have different meanings for individual families and family members at different times. It may sometimes involve taking part actively in health care or
therapy and the less perceived sharing of care during other periods. Family-centred care should allow family members to identify their own roles (Franck and Callery 2004) and to define who constitutes ‘their family’, particularly where extended families are involved (Irlam and Bruce 2002).

In more traditional approaches to care, the therapist can be seen as the expert aiming to use his or her professional skills to bring about positive change in the individual child. This may result in an unequal relationship with the family. In a family-centred approach, skills relating to developing quality in relationships with families and dealing positively with family members’ feelings regarding their situation may be equally important (Hanna and Rodger 2002).

In a study involving student and more experienced paediatric nurses regarding their perceptions of family-centred care, the students were unsure about aspects of the concept. It has been suggested that it is important that health care staff first feel confident about their own skills or they may not feel enabled to pass these on effectively to families (Hutchfield 1999).

The implementation of family-centred care can be hindered by several other factors. These may include a perceived difficulty by health care workers of integrating professional knowledge and the family’s knowledge of the child and their therapy needs, and also conflicts between the needs of the child and the needs of the family (Franck and Callery 2004). The lack of time to listen to a family’s concerns or to work with a family and making judgements about families have also been identified as impeding family-centred care (Hutchfield 1999, Haglund and Henriksson 2003). It is acknowledged that applying the concept to extended families within ethnic minority groups has been lacking in the United Kingdom because of the focus on the traditional nuclear family (Ochien 2003).

From a search of the current literature, tools that assess family-centred intervention services were identified: the Family Focused Intervention Scale (Mahoney et al 2001), Family Centered Program Rating Scale (Murphy and Lee 1991), Scale for Evaluating Early Intervention Programs (Mitchell 1991), Family Needs Questionnaire (Walland et al 1993) and the Measure of Processes of Care (King et al 1995). The first three tools were designed for the parents of very young children and the next tool for the parents of children with head injury, so all these were unsuitable for the needs of the present study. The most appropriate tool was the Measure of Processes of Care (MPOC) (King et al 1993).

The MPOC was developed to identify parents’ perceptions of the extent to which certain health professionals’ behaviours occur within childhood rehabilitation services. These behaviours are considered to represent important aspects of delivering a family-centred service, such as being respectful and supportive of families and providing a coordinated service. The MPOC has been used with the parents of children with cerebral palsy (King et al 1997, O’Neil et al 2001, Granat et al 2002) and has been employed either as a single assessment tool for children’s services (King et al 1997, Granat et al 2002, Bjerre et al 2004) or in conjunction with others to provide a more extensive evaluation (O’Neil et al 2001, Stewart et al 2004).

**Aim of the study**

The aim of this study was to investigate families’ perceptions of the care received at the Bobath Centre in Scotland during their child’s therapy block, in one 12-month period, and in particular the extent to which the service was deemed to be ‘family friendly’ by those users. The MPOC was chosen as the most appropriate standardised measurement tool for this purpose.

**Method**

Participants were recruited from the population of families attending Bobath Scotland for therapy for their children. The sample consisted of families whose child had attended for a therapy block of either 2 weeks or 6 weeks during a 12-month period (n = 114). The MPOC questionnaire was sent to each family, with a covering letter explaining the study together with instructions on completing the questionnaire, with reference to their most recent visit to the centre. Emphasis was given in the letter that any involvement in the study was voluntary and that all information supplied would be confidential. The completion of the questionnaire was therefore taken as consent to participate in the study. It was considered important to retain the confidentiality of respondents’ information, so that people felt able to be honest in their responses. However, each questionnaire was numbered to allow the tracing of non-respondents and one follow-up reminder telephone call was made to this group.

As this study only involved the completion of one questionnaire and a detailed covering letter was supplied which addressed the potential ethical issues of confidentiality and the voluntary nature of the study, it was considered that presenting the study for ethical approval was not critical under these circumstances.

**Materials**

The MPOC is a 56-item self-administered parent questionnaire. Items are arranged in five scales: enabling and partnership; providing general information; providing specific information; coordinated and comprehensive care; and respectful and supportive care. Items are scored on a 7-point scale, from a behaviour ‘never’ occurring (1) up to ‘occurs to a great extent’ (7). A response of ‘0’ indicates that the item was ‘not applicable’. There is a section for additional comments. Examples of items appear in Table 1 (King et al 1996). A mean is calculated from the raw item scores for each scale to give a mean scale score.

Studies have shown good test re-test reliability. In one study, 29 parents completed the test twice at an interval of 3 weeks. Intra-class correlation coefficients ranged from 0.78 to 0.88 for the different scales (King et al 1995).

Various validity studies were conducted during the initial development of the test. The content validity of draft test items was assessed by groups of parents and health care providers. Subsequently, items considered to be highly important were retained and other items removed to produce the final version. In face validity studies using the final version of the MPOC, parents gave responses.
suggesting that they considered the MPOC ‘acceptable and relevant to parents’ (King et al 1995).

It was proposed that there would be a positive correlation between the scores of the MPOC and the Client Satisfaction Questionnaire, which measures clients’ satisfaction with a service or programme. A study of 151 parents yielded Pearson correlation coefficients of between 0.4 and 0.64 showing fair to good correlations for all scales, except for providing specific information which received a lower score (King et al 1995). Other construct validity studies have included investigating the relationship between the MPOC and parental stress, where higher levels of family-centred service were shown to be associated with lower levels of stress (King et al 1995).

The MPOC has also been shown to be capable of detecting differences between parents’ views of care received at different centres (King et al 1997, Bjerre et al 2004). The potential of the MPOC as an evaluative tool has not yet been assessed, although its authors suggest that it can be used for that purpose (King et al 1995).

Data analysis

Raw data from score sheets were recorded on an Excel spreadsheet and, using this software, means were calculated from the raw item scores for each scale to give mean scale scores. Descriptive statistics, including minimum and maximum scores, range and standard deviations, were also calculated to illustrate variability within the data. The data entries, means and descriptive statistics were entered and calculated by an independent researcher and then checked by one of the authors to ensure accuracy.

Mean scale scores along with individual item scores can be analysed to identify the relative strengths and weaknesses of a service. The authors of the MPOC suggest that to determine areas where improvements in service might be required, analysing the percentage of parents who consider a behaviour to occur ‘more than sometimes’ (score 5-7) and those who consider a behaviour to occur ‘never’ to ‘sometimes or less’ (score 1-4) may give more detailed information (King et al 1995). For this study, the items where over 90% of the respondents considered that the behaviour was occurring ‘more than sometimes’ up to ‘a great extent’ (score 5, 6 and 7) were identified to raise awareness of the specific strengths of the service. Items where 33% or more respondents recorded behaviours as occurring ‘sometimes or less’ to ‘never’ (scores of 1-4) were also identified because these could represent aspects of the service that need re-evaluating. This analysis was conducted by the independent researcher and one of the authors checked it independently for accuracy.

Results

Questionnaires were sent to 114 families and 72 were completed and returned (63%). Mean scale scores and descriptive statistics were calculated (see Fig. 1 and Table 2). Overall, the scores were high, apart from a lower score for providing general information. This scale received the largest number of ‘not applicable’ responses.

![Fig. 1. MPOC mean scaled scores (±1 SD).](image-url)

Table 1. Examples of MPOC items from each scale (King et al 1996)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Examples of individual items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabling and partnership</td>
<td>Make sure you have a chance during visits to the centre to say what is important to you.</td>
</tr>
<tr>
<td>General information</td>
<td>Have information available about your child’s disability, for example, its causes, how it</td>
</tr>
<tr>
<td></td>
<td>progresses, future outlook.</td>
</tr>
<tr>
<td>Specific information</td>
<td>Provide you with written information about your child’s progress.</td>
</tr>
<tr>
<td>Coordinated and comprehensive care</td>
<td>Take the time to establish rapport with you or your child when changes occur in your services.</td>
</tr>
<tr>
<td>Respectful and supportive care</td>
<td>Remember personal details about your child or family when speaking with you.</td>
</tr>
</tbody>
</table>

Table 2. Descriptive statistics for MPOC scale scores (n = 72)

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Enabling/partnership</th>
<th>General information</th>
<th>Specific information</th>
<th>Coordinated care</th>
<th>Respectful care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>6.34</td>
<td>4.31</td>
<td>6.47</td>
<td>6.28</td>
<td>6.51</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.64</td>
<td>1.69</td>
<td>0.75</td>
<td>0.75</td>
<td>0.60</td>
</tr>
<tr>
<td>Minimum</td>
<td>4.25</td>
<td>1.29</td>
<td>2.50</td>
<td>2.94</td>
<td>4.56</td>
</tr>
<tr>
<td>Maximum</td>
<td>7.00</td>
<td>7.00</td>
<td>7.00</td>
<td>7.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Range</td>
<td>2.75</td>
<td>5.71</td>
<td>4.50</td>
<td>4.06</td>
<td>2.44</td>
</tr>
</tbody>
</table>
Thirty-eight (68%) out of the 56 items were identified where over 90% of the respondents recorded a score of 5, 6 or 7. These 38 items were from four domains: enabling and partnership; providing specific information; coordinated and comprehensive care; and respectful and supportive care. To try to provide more meaningful information regarding the strengths of the service, the threshold was raised to over 98% of respondents, resulting in 10 items (Table 3).

Seven items were identified where 33% or more respondents recorded a score of 1-4. All were from the general information scale (Table 4).

**Discussion**

A high response rate for a questionnaire is considered to be over 80% (Streiner and Norman 1995). The response rate in this study was lower, at 63%. However, this compared well with other postal MPOC studies, which showed return rates of 49%-67% (McConachie and Logan 2003); 61% (Granat et al 2002); and 59.3% (Swaine et al 1999). A study in Sweden produced a return rate of 74%, but only 52% of the questionnaires contained sufficient data to allow for analysis. This higher return rate might have been due to the strategy of using two postal reminders. The majority of the non-respondents who gave reasons for not returning the questionnaire stated that they had had little contact with the children’s services in the last year (Bjerre et al 2004).

Overall, the mean scale scores were high (4.31 for general information and 6.28-6.51 for the remaining scales), demonstrating that the families considered the service to be family centred. High ratings for family-centredness have been correlated with high overall levels of satisfaction with the care received in studies of other children's services (King et al 1996, 2000). The results of the present study also compared favourably with previous studies of children's therapy services, such as the data from the pilot testing study (n = 653) where the mean scores ranged from 4.08 to 4.39 for general information and from 5.14 to 6.08 for the other scales (King et al 1995).

The MPOC items where 98% or more respondents gave scores of 5-7 (behaviour occurring ‘more than sometimes’ up to ‘a great extent’) were mainly from the following scales: enabling and partnership; coordinated and comprehensive care; and respectful and supportive care.
care; and respectful and supportive care. This suggests that Bobath Scotland was delivering a family-centred approach in these areas.

Of the items achieving the lowest scores, the management team and therapists determined those that were thought to fall within the ethos of Bobath Scotland: to be a tertiary level of support in addition to the usual local services, not taking the place of local therapy services. These items were then evaluated to determine whether any changes to current practice might enhance service delivery.

Items considered to be within the remit of Bobath Scotland

- 49. Promote family-to-family gatherings for social, informational or shared experiences.
- 50. Provide opportunities for special guests to speak to parents on topics of interest.
- 51. Provide support to help cope with the impact of childhood disability, for example, advocating on your behalf or informing you of assistance programmes.
- 52. Have general information available about different concerns, for example, financial costs or assistance, genetic counselling, dating and sexuality.
- 53. Have information available about your child's disability, for example, its causes, how it progresses, future outlook.
- 54. Provide advice on how to get information or to contact other parents, for example, centre's parent resource library.
- 55. Provide opportunities for the entire family to obtain information.

Information is given directly in response to requests by parents within therapy sessions and, when parents consent, to other family members if present. Although some parents reported these behaviours to be occurring sometimes or less, many reported that they were happening more often, making comments such as:

When we first came into contact with Bobath … they began to explain very clearly to us why our son was doing a lot of the movements and behaviour that was worrying us.

The therapists are true experts in their field. The fact that his disability is not looked at in isolation but in a more holistic way is a breath of fresh air.

Usually only parents attend the therapy sessions, but a video is made for them of their child's therapy so that other family members may be able to watch this if interested. More general written information is available in the parents' library.

In response to items 53-55, the parents' library has been updated and expanded to include more information about parent support groups, holidays and other therapies. Children attending the centre have been encouraged to write about their experiences in the centre newsletter, such as giving their opinions on specific types of equipment.

Items not considered to be within the remit of Bobath Scotland

- 56. Have general information available about different concerns, for example, financial costs or assistance, genetic counselling, dating and sexuality.

Some information is provided within the parents' library on these topics and the library facility was improved after the study. However, detailed information on locally available services is not provided. Children attend from all over Scotland, including the Western Isles, Orkney and Shetland, and it would not be practical to provide up-to-date information on all local services.

Providing general information scale

Providing general information received a lower mean scale score. On reflection, this was not unexpected, because some items were more related to local services rather than a tertiary service. In research by the MPOC authors (King et al 1995, 2000) and subsequent published research studies, this scale has also consistently received the lowest mean scale scores (King et al 1997, Swaine et al 1999, Larsson 2000, Granat et al 2002, McConachie and Logan 2003, Bjerre et al 2004). This may indicate that all services that were surveyed functioned less well in this area. It could also be a characteristic of the measure that this scale either demands a higher level of service provision than other test scales or is not a completely valid measure of this area. More research is needed to clarify the meaning of these results.

In the study by Bjerre et al (2004), one out of the four children's centres assessed had a particularly low score. The authors suggested that this might relate to that centre having had no 'general information' activities within the previous year, such as lectures.
Implications for occupational therapy

Recently, there has been more emphasis within the research literature of the need for paediatric occupational therapy services to deliver family-centred care (Carrigan et al 2001, Wilkins et al 2001, Hanna and Rodger 2002). It is unlikely that there will be a return to the notion of the therapist as the expert and the families as the passive beneficiaries of care (Hanna and Rodger 2002). The MPOC proved a useful objective tool for measuring the perceptions of parents receiving care at a paediatric therapy centre. It could be applied in other paediatric therapy settings to investigate the perceptions of the care received by parents. The results could be used as a basis for developing more family-centred care by making appropriate changes in the areas receiving lower scores. The MPOC could also be used as a form of audit of a service over time to assess whether specific standards are being met by a service.

The experience of this study was that the MPOC can promote positive reflection by therapists on the care that they were delivering and how this might be improved. It can also stimulate debate on the concept of a family-centred approach, what this means in day-to-day working and what specific skills and further training are required to make it a reality.

Limitations of study and recommendations for future studies

In this study, 37% of families did not return a completed questionnaire. The results may reflect the majority of opinion, but non-respondents may have different views to the respondents. In future studies, the provision of the option of completing the questionnaire by telephone, with an independent researcher, might increase the response rate. The use of postal reminders and also a questionnaire to non-respondents regarding their reasons for non-completion might also be beneficial, as occurred in the study by Bjerre et al (2004).

Another reason for a non-response might be the length of the questionnaire, which contains 56 items and so might be perceived as a very time-consuming exercise by parents. Bjerre et al (2004) received comments from several parents to this effect. A short form of the questionnaire with only 20 items is now also available and the use of this form might improve response rates (King et al 1998).

In this study, additional data were not collected about the characteristics of the families and no differentiation was made between those who responded and those who did not choose to complete a questionnaire for the purpose of analysing the characteristics of the two groups. In future studies, it would be beneficial to collect demographic variables relating to the whole sample and then to compare the respondents with the non-respondents to see if the two groups differ.

The views of the Bobath therapists on the care that they provided were not recorded. It would be interesting to know if these differed from the views of the parents and carers. A service provider’s version of the MPOC is now available and could be used for this purpose in any future study (Swaine et al 1999).

Data were collected at only one point in time. It would be useful to assess the impact of the changes that were made to the service in response to the study. However, although the authors suggest the use of the MPOC as an outcome measure, its validity for this purpose has not yet been established (King et al 1993).

This study used a convenience sample of parents attending one Bobath centre during a 12-month period. The results cannot therefore be generalised to other populations of parents or to other children’s therapy centres. In future research, it may be beneficial to sample parents attending a therapy centre over a longer time frame, to use a random sampling of parents and to make comparisons with other similar types of centre.

Conclusion

Ninety per cent or more of the respondents felt that Bobath Scotland provided services that were enabling, respectful and supportive, worked in partnership with parents, gave coordinated and comprehensive care and provided specific information. The MPOC gave useful information about the perceptions by caregivers of the service that they were receiving through Bobath Scotland and some changes were made to address the perceived weaker areas. The section on providing general information, which received the lowest scores, is possibly more suited to a local service. More research to investigate the sensitivity of the MPOC would be beneficial to determine the potential of this assessment tool as an outcome measure. Future research could then potentially investigate the introduction of service changes and consequent effects on the degree to which a service was considered to be family-centred.

Acknowledgements

The MPOC scales and individual items (Tables 1, 3 and 4) are reproduced from King et al (1996) by kind permission of Susanne King and of Mac Keith Press, publishers of Developmental Medicine and Child Neurology.

The MPOC is available from the CanChild website: www.fhs.mcmaster.ca/canchild

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