Parent satisfaction with the Minimal Motor Dysfunction Unit: a survey

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This study investigated parent satisfaction with the Minimal Motor Dysfunction Unit (MMDU), a service for clumsy children based in Adelaide. A questionnaire was developed and mailed to 102 parents whose children had attended the MMDU between 1991 and 1993. The response rate was 76 per cent.

The level of parent satisfaction with the overall MMDU service was 86 per cent. Parents rated the processes of service delivery and the resulting outcomes as more important to them than structural aspects of the service. Based on parent comments, recommendations were made to assist in further improving the quality of the MMDU service. Parent satisfaction should be investigated as an outcome measure for other paediatric physiotherapy services.

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Minimal motor dysfunction (MMD) is one of a myriad of labels applied to clusters of minor sensory-motor problems occurring in at least 5 per cent of school-aged children (Gillberg et al 1989). The wide range of possible symptoms result in problems with gross and fine motor skills, adversely affecting the child's ability to function successfully at home and at school (Abbie-Denton 1979, Gillberg et al 1989). Sensory-motor problems in children are significantly associated with antisocial behaviours and poor learning (Gillberg et al 1989) and subsequent poor performance and achievement in educational and sporting arenas is likely to have a profound impact on the social and vocational prospects of the child with MMD. The approach to management of MMD is usually multidisciplinary, but as motor difficulties are among the most common problems, physiotherapists are often involved (Bullock and Watter 1978). However, outcome measurement can be problematic with this heterogeneous group of children, because their prognosis is an area of some controversy (Losse et al 1991). The views of parents have rarely been solicited when evaluating intervention services for children with MMD.

The Minimal Motor Dysfunction Unit

The Minimal Motor Dysfunction Unit (MMDU) is an assessment and intervention service for children with MMD, jointly resourced by the Physiotherapy Department of the Women's and Children's Hospital in Adelaide and the South Australian Education Department. The service began in 1974 and a descriptive paper about its first three years was published in 1978 (Abbie et al 1978). The service has evolved over its 20 years of existence, with the cooperation and participation of parents becoming a more crucial element of the program. The MMDU currently provides a service package for children with MMD and their parents which is a blend of physiotherapy and education principles. The service aims to promote the physical progress, confidence and social skills of the children through structured group sessions. Education of parents about the nature, implications and management of MMD and fostering of parents' advocacy skills are considered equally important aims of the service. Although the service providers routinely solicit and utilise parent feedback, to date there has been no formal evaluation of the service provided by the MMDU.

Surveying satisfaction

In the current economic climate, there is pressure on all health care providers to demonstrate that they are providing effective, high quality services. Client satisfaction surveys are increasingly being used as a vital adjunct to other indices of health service quality, such as clinical outcome and quality of life measures (Westbrook 1993). The criticism most often levelled at studies ➥

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of satisfaction is that survey responses lack variability, resulting in very little useful information (Lebow 1982, Westbrook 1993). However, careful attention to valid questionnaire construction can assist in eliciting responses reflecting a more realistic range of respondent satisfaction. These methodological considerations will now be discussed.

Satisfaction obviously is not uni-dimensional, therefore client satisfaction with a range of service dimensions, as well as overall satisfaction, should be measured (Gutek 1978, Lebow 1982). The key dimensions of service quality identified in previous satisfaction research are structure, process and outcome (Cleary and McNeil 1988, Donabedian 1988, Lohr 1988). Structure refers to the physical setting and resources available; process to the way in which the service is delivered; and outcome to the end-result of these processes. Designing questions relevant to each of these dimensions should provide more specific information for use by clinicians and administrators involved in planning and improving services. In order to add to the meaning of satisfaction ratings, respondents can also be asked to weight each item for importance to them (El-Guebaly et al 1983, Gutek 1978). The use of a balanced scale with some favourably and some unfavourably worded questions should help to overcome any tendency for respondents to always select the positive response option (Ware 1978). Much more discriminating information may be gained by including explicitly-formatted open-ended questions, for example "What two things did you most like about the service?" (Larsen et al 1979, McKillip et al 1992, Perreault et al 1993). Finally, stressing respondent anonymity should improve the honesty of responses.

Due to growing emphasis on client empowerment in health care, client satisfaction is gaining credibility as an important outcome measure (Lohr 1988). A parent satisfaction survey was considered an appropriate service evaluation tool for the MMDU because parents are consumers of the service and are required to actively participate in the program. The aims of the study were:

(i) to determine the level of parent satisfaction with the overall service provided by the MMDU;

(ii) to determine the level of parent satisfaction with the specific service dimensions of structure, process and outcome;

(iii) to identify the elements of the MMDU service most important to parents;

(iv) to identify any unmet needs reported by parents whose children have attended the MMDU;

(v) to examine the relationship between parent satisfaction and selected demographic and treatment variables; and

(vi) to make recommendations regarding improvements to the MMDU service.

Method

The study population was a representative sample of all parents of children who had completed treatment in the MMDU group program during 1991, 1992 and 1993. Subjects were excluded if their children had completed group treatment at the MMDU before 1991 or if their children had been assessed by the MMDU but did not receive group treatment. Parents of children attending the MMDU at the time of the study were also excluded, to minimise reactive responses (Lebow 1982).

Questionnaire development and administration

The research design used in this study was a combination of non-experimental quantitative and qualitative approaches, with data collected by a self-administered questionnaire survey. Initially, four focus group discussions were conducted with the parents of children attending the MMDU at the time of the study. A further focus group was conducted with the MMDU service providers. It was on the basis of the issues raised during these audiotaped discussions that the major part of the questionnaire was developed. This consisted of three sub-scales relating specifically to the service dimensions of structure, process and outcome of the MMDU. A short scale from the Client Satisfaction Questionnaire or CSQ (Larsen et al 1979) was also included, to measure more global satisfaction with the service. Four response options, from very satisfied to very dissatisfied, were provided for the closed-ended items, supplemented by a three-point weighting for importance of each item. A number of specifically worded open-ended questions were also included and a final section collected selected demographic and treatment details.

Two procedures were utilised in an effort to establish content or face validity of the questionnaire. The first of these was the use of focus groups, to identify relevant domains of parent satisfaction for construction of specific questionnaire items. The second process was the submission of the draft questionnaire for review by a panel of experienced paediatric physiotherapists, a health service manager and a social scientist (n = 5).

Prior to printing, the questionnaire was tested in a pilot study on seven parents who were then attending the MMDU. The re-drafted questionnaire, accompanied by a covering letter, was then sent to all subjects in three rounds with two weeks between each mail-out.

Data analysis

The closed-ended questions were coded and analysed using the SPSS statistical program. A variable representing aggregate parent satisfaction was cross-tabulated with average parent satisfaction with structure, process and outcome as well as the following demographic and treatment variables: parent's age; parent's gender; child's gender; number of terms attended; waiting time between referrral and initial

Table 1.
Reliability estimates for questionnaire subscales.

Scale dimension	Coefficient
Structure	0.73
Process	0.75
Outcome	0.75
Global satisfaction	0.75

Table 2.
Satisfaction with MMDU service structure.

Item	Satisfaction rating (%)
Convenient location	97
No of terms attended	92
Suitable parents' area	92
Time of session	88
Waiting time for group	83
Venue facilities	78

Table 3.
Satisfaction with MMDU service processes.

Item	Satisfaction rating (%)
Understandable level of information	98
Clear expectations of parents	97
Understanding of parent's role	96
Learning to teach child new skills	96
Clear program aims	95
Support from other parents	91
Amount of parent involvement	91
Advocacy skills learnt at parent/teacher evening	87
Inclusion in goal-setting	83
Enough time for questions	68
Manageable homework activities	65

Table 4.
Satisfaction with MMDU service outcomes.

Item	Satisfaction rating (%)
Better understanding of MMD	96
Better understanding of child's problems	95
More able to explain child's problems to others	94
More able to help child	92
Child's gains at MMDU	91

assessment by the MMDU; waiting time between assessment and commencement in MMDU group: group leader; and case coordination. The χ^2 contingency table test was used to identify significant correlations. The open-ended questions were analysed manually using content analysis, which involved organising the responses into naturally developing categories by grouping words or sentences corresponding to the same concept.

Testing for internal consistency is the most common reliability procedure carried out on questionnaires and indicates the extent to which items within a scale are interrelated (Lebow 1982). A reliability coefficient was calculated for each of the questionnaire sub-scales of structure, process, outcome and overall satisfaction to establish whether the items in each sub-scale reliably represented the stated service dimension.

Results

The reliability estimates for each of the questionnaire sub-scales appear in Table 1. The survey response rate was 76 per cent, with 77 questionnaires being returned from a total of 102 subjects.

The level of satisfaction with the overall service provided by the MMDU was calculated from the three CSQ items included in the questionnaire. The combined positive responses from each question were averaged, resulting in a sub-scale average of 86 per cent. Sub-scale averages were similarly calculated by dividing the total percentage of "satisfied" or "very satisfied" responses by the number of questions in the sub-scale. The average level of parent satisfaction both with the structural aspects of the MMDU service and its processes was 88 per cent. On average, 94 per cent of parents were either satisfied or very satisfied with the outcomes of the MMDU service. Levels of parent satisfaction with specific items of structure, process and outcome are summarised in Tables 2, 3 and 4 respectively.

An open-ended question shed further light on what parents regarded as the most valuable outcomes of the MMDU program. Forty-four per cent of responding parents said increased confidence and self esteem were the most important gains their child had made, while only 21 per cent said that improved motor skills were the most important gain. Parents were also asked an open-ended question about the most important thing they had gained through attending the MMDU. The most frequent response was a greater understanding of their child's problems.

Subjects were asked to give an importance weighting to each of the 22 closed-ended items from the three service dimension sub-scales. The 10 elements of the MMDU service most important to parents are listed in Table 5, from most important to least important. In reponse to an open-ended question asking parents what

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they most liked about the MMDU service, the most frequent response was "the understanding and support from the MMDU staff".

In an attempt to elicit specific information about needs which parents felt were not being met by the service, a number of open-ended questions were included in the questionnaire. Elements of the MMDU service parents least liked were the amount of school missed due to the scheduling of the sessions, parking difficulties, lack of time for discussion with the MMDU staff and lack of follow-up. Responses regarding parent suggestions for changes and improvements to the MMDU service are collated in Table 6.

Aggregate parent satisfaction with the MMDU was positively related to parent satisfaction with both the MMDU's service processes ($\chi^2 = 16.96, p < 0.001$) and outcomes ($\chi^2 = 19.29, p < 0.001$). There was no significant relationship between aggregate parent satisfaction and parent satisfaction with structure or any of the demographic and treatment variables examined.

Table 5.
Most important MMDU service elements to parents.

Ranking	Item	Service dimension
1	Better understanding of child's problems	Outcome
2	Clear program aims	Process
3	Learning to teach child new skills	Process
4	Understandable level of information	Process
5	Child's gains at MMDU	Outcome
6	Amount of parent involvement	Process
7	Number of terms attended	Structure
8	More able to help child	Outcome
9	Clear expectations of parents	Process
10	Enough time for questions	Process

Table 6.
Parent suggestions for changes and improvements to MMDU.

Suggestion	Percentage of 97 comments
Structure	
• increase resources to expand service, especially more venues in metropolitan area	15.5
• increase length of time attending MMDU	7.2
• reduce waiting time to get in to MMDU	6.2
• offer session times out of school hours	5.2
• improve parking facilities	3.1
• offer bus service to MMDU	1.0
Process	
• increase public awareness of MMDU, more communication and involvement with Education Dept, schools, Child and Youth Health, doctors, community	19.6
• place more value on parent input	4.1
• increase group games/interaction/play	4.1
• more follow-up/support after completing program	3.1
• decrease competition and 'performances' by children	3.1
• excellent job, do not reduce/remove	3.1
• more time for parent discussion	3.1
• more individual focus on child's strengths/needs	3.1
• simplify information, collate resources for parents	2.1
• miscellaneous single comments	8.0

Discussion

Published reliability estimates of patient satisfaction range from 0.47 to 0.90, with modest reliabilities of 0.50 to 0.60 considered acceptable in the early stages of research (Pascoe 1983, Ware et al 1978). The level of sub-scale reliability reached in this study compares favourably with these estimates. The survey response rate was high compared with the 40 to 50 per cent typically reported for mail-out surveys (Lebow 1982, Westbrook 1993) and the data collected during focus group discussions reinforced the survey data. These two factors suggest that the findings of this study may be considered reasonably representative of the views of parents attending the MMDU with their children over the past few years. However, sampling bias does need to be considered when discussing the results, since it is possible that the more dissatisfied

service users did not return their questionnaires. An adequate understanding and command of written English would also have been necessary to self-complete the questionnaire, and some of the non-responding subjects may not have had these skills due, for example, to educational and/or cultural background.

In this study parent satisfaction was used as a dependent variable to measure the quality of the MMDU service. The level of parent satisfaction with the overall MMDU service is similar to previously reported levels of parent satisfaction with outpatient services for children (Kotsopoulos et al 1989, Loff et al 1987). However, such a global measure of satisfaction is not very discriminating and therefore difficult to interpret. The average level of satisfaction for each of the service dimension sub-scales is similarly high and lacking in variation, and it is not until individual questionnaire items and additional comments from parents are explored that more useful information can be identified.

Parents registered low levels of satisfaction with a number of service processes which it may be possible to remedy fully only through structural changes to the service, particularly increased resources. For example, nearly a third of the survey respondents were dissatisfied with the amount of time available for discussion with the MMDU staff. While this aspect of the service was included under the dimension of process, structural constraints such as venue-sharing limit the amount of time available. However, several other aspects of service process with which parents were less satisfied also indicate the need for the MMDU to provide more time and support to parents as valued partners in the achievement of the program's aims. In summary, the very high level of satisfaction with the majority of the MMDU's service processes, and the subsequently high level of satisfaction with the resulting outcomes, suggests that the MMDU is offering a high quality service to its clientele.

Further insight into parent satisfaction was gained through parents' importance ratings of the elements of the service included in the questionnaire. Parents' importance ratings indicated that the processes and outcomes of the MMDU service were more important to parents than structural issues. The most significant predictor of parents' aggregate satisfaction with the MMDU service was satisfaction with outcome. The only other single predictor of aggregate satisfaction was parent satisfaction with process. This finding suggests that changes addressing areas of dissatisfaction with the MMDU's processes and outcomes are more likely to improve overall parent satisfaction with the service than structural changes.

In recent times, the rising costs of health care have exerted increasing pressure on service providers to measure outcomes as an indicator of service quality and efficacy. To date the MMDU has found evaluation of service outcomes in its heterogeneous client group problematic. Objective tests of motor performance do not necessarily reflect improvements in daily living skills in the child with MMD (Schoemaker and Kalverboer 1990) and non-physical gains such as increased confidence have not previously been measured by the MMDU. The satisfaction reported by the responding parents who have attended the MMDU over the past few years can be considered a positive outcome of the service in its own right (Cleary and McNeil 1988, Lohr 1988).

The survey findings suggest a number of features of the MMDU service which could be manipulated in an effort to address areas causing dissatisfaction, and thereby further improve the quality of the service. The following recommendations, which emerge from the analysis of parent satisfaction, could be considered by service providers and administrators to assist in improving the service provided by the MMDU:

1. That the MMDU's public education role be expanded to promote greater awareness and understanding of MMD and the service offered by the MMDU.
2. That short published scales to measure changes in the child's confidence/self-esteem and behaviour be investigated for use as possible outcome indicators.
3. That greater parent involvement be actively promoted in the setting and reviewing of goals for the child, with more scheduled question time.
4. That waiting time for inclusion in the MMDU group program be reduced.
5. That local council permission be sought to allocate a set number of designated parking spaces for clientele of the MMDU.
6. That the possibility of offering session times outside of school hours be explored.
7. That MMDU staff development include regular reflection on communication issues.
8. That the MMDU service providers continue to balance their emphasis on the role and importance of home activities with the recognition of parents' other commitments.
9. That options for formal follow-up of families after they have completed the MMDU program be explored.
10. That parent satisfaction with all service dimensions of the MMDU be reassessed every three to five years as a total quality management strategy.

Although it is not possible to extrapolate the results of this study to other intervention services for children, this research demonstrates that a parent satisfaction survey is a valid and reliable method of service evaluation which can provide useful data about the quality of outpatient paediatric services. Information elicited from parents may assist clinicians and administrators with service planning, improvement of service provision and budget justification. Establishing

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parent satisfaction is a particularly valuable outcome measure for services involved in the management of children with minor neurological dysfunctions, where other outcome indicators may not be easily defined and whose prognosis is still an area of great debate (Losse et al 1991).

Conclusions

The results of this study revealed that parents who replied to the questionnaire were very satisfied with the service being provided to their children by the MMDU. The overall level of satisfaction with the MMDU reported by these parents was 86 per cent. The average level of satisfaction with specific dimensions of the MMDU service was similarly high, with 88 per cent of responding parents reporting they were satisfied with the structure and processes of the service. An even greater proportion of respondents (94 per cent) were satisfied with the outcomes of the MMDU service. This study provides some evidence to suggest that the MMDU is providing a quality service in terms of both its processes and the resulting outcomes. However, further outcome measures need to be examined to substantiate this conclusion.

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