

THE DEVELOPMENT OF A COMMUNICATION ASSESSMENT PROCEDURE FOR USE WITH ADULTS WITH A MENTAL HANDICAP - AN INTERIM REPORT

ANNA VAN DER GAAG *

INTRODUCTION

An essential part of improving services to mentally handicapped people is to provide a clear, structured description of their communication skills. The acquisition of social skills is heavily dependent upon communicative ability (Whelan & Speake (1977). Leudar & Frazer (1985) have demonstrated that behaviour problems in mentally handicapped adults can be the direct consequence of difficulty in communicating. In view of this, a measure that is sensitive to communication skills is vital to any deinstitutionalisation programme. At present there are no procedures designed specifically for the use with a mentally handicapped adult population (Pickett & Flynn, 1983). Two types of clinical procedure are at present in use but both have their limitations.

1. Checklists of general ability are available (cf Stallard & Dickens, 1986; Hogg & Raynes, 1986) but they are essentially for use by non-specialist staff. They cannot function as adequate assessment tools for the speech therapist, as they provide minimal information on communication skills.

2. Language tests such as the Reynell Developmental Language Scale standardised on normal child populations (1969).

Using tests with inappropriate norms will highlight the person's deficits rather than reveal his/her strengths. As the main emphasis in teaching adults with a mental handicap is not on improving language skills in relation to some age level but on MAXIMISING USAGE of communication skills, this approach is not an appropriate one (Owings & Guyette, 1982).

THE COMMUNICATION ASSESSMENT PROFILE (CASP)

It was for this reason that the CASP was developed. It aims to establish areas of strength and weakness in the client and to use this as a basis for further assessment and treatment (Kiernan & Jones, 1982).

The CASP examines the client's 'communicative competence'. This includes assessment of linguistic form (the rules of language) and linguistic function (the application of these rules). It also involves examination of the 'communication environment' i.e. assessing the communication demands being made on the client and how far his/her communication skills match these demands (Owings & Guyette 1982; Snyder, 1984). This represents a 'systems' approach in that it assesses the individual in relation to his/her environment (Blunden, 1976). The CASP is based on the premise that all these aspects of communication need to be assessed if an accurate evaluation of the individual is to be made. Central to this is the involvement of the care staff in the assessment procedure. They provide a perspective on the client's communication skills that cannot be made by the speech therapist; it must be a joint investigation in order that all aspects of communication can be properly assessed.

* The Victoria Infirmary, Glasgow G42 9TY.

Materials

The CASP is divided into two parts, plus an Appendix. Part 1 is composed of a staff questionnaire to be filled in by the staff member who works closely with the client (in some centres this staff member is known as the 'Key Worker'). It consists of 21 questions about how the client is using his communication skills and a further 27 questions on the social/communication environment. The questionnaire takes 10—15 minutes to complete.

Part 2 is for use by the speech therapist. It is made up of 8 sections and an Appendix. Four of these sections make use of a collection of photographs which were prepared specifically for CASP and are used to assess auditory discrimination, understanding and expression at single word and sentence levels. These sections also assess understanding of concepts and recognition of social signs. The Appendix also contains tasks for assessing specific skills in more detail, e.g. oromuscular, feeding and articulation skills. Part 2 takes half an hour to three quarters of an hour to complete.

Finally, there is a summary sheet for the client's file which brings together the two assessments (of keyworker and speech therapist) and is primarily a record of the client's strengths and a corresponding outline of priorities for change based on the principles of goal planning. The client's own views on his/her communication skills are sought and are taken into account when planning priorities for change.

AIMS OF THE STUDY

In order to determine the reliability of CASP three research aims were identified.

1. To assess the test retest data of part 2 of CASP.
2. To assess the inter-rater reliability of part 2.
3. To determine the reliability of the key workers' responses and whether or not speech therapists and key workers agreed more often than did speech therapists and non-key workers on assessment of the clients' use of communication skills.

METHOD

Pilot Study – February to March 1986

Sampling

Three adult training centres and one hospital in the Greater Glasgow Area were selected, each from a different geographical region. A centre in Fife was also included as a sample from outside the Greater Glasgow area.

Eight subjects were selected from each of the centres and from the hospital, giving a total of 40 subjects.

The experiment was carried out in three parts in each location.

Part 1 – Staff Questionnaire

Five subjects were selected on a random basis from the Centre/Hospital register (every fifth name). Subjects who were profoundly handicapped were excluded from the sample. The Manager (or Chief Nursing Officer) then selected five members of staff to complete questionnaires on the five subjects. Each staff member completed a questionnaire on the subject for whom he/she was a 'key worker' (or equivalent) and on two other subjects. This randomised complete block design allowed cross comparisons between the 'key worker' and non-key workers in each centre to be made. Questionnaires were filled in independently.

Part 2 –Therapists Assessment

Two therapists in each centre then assessed the same five subjects on the CASP. Therapist 1 assessed each subject and therapist 2 assessed the same subject four weeks later. The assessment was administered in the same way both times. This part of the experiment allowed examination of inter-rater reliability.

Part 3

Therapists assessment of a further three subjects of varying levels of ability

One therapist in each centre (whoever was visiting the centre on a regular basis) then selected a further three subjects for assessment on the CASP. They were selected on the basis of general ability; one high, one medium and one low ability. The therapist made these judgements using informal assessments. Subjects were assessed twice over a four week period.

RESULTS

Analyses of the staff questionnaire included examining the frequency of response to each question. Percentage agreements were made between staff members and between staff members and speech therapists on clients' communicative functions.

On the therapists' part of CASP the spread of scores was analysed on each subtest and percentage agreements between and within therapists were obtained. A qualitative analysis of the errors on each subject was also made. In this way items that appeared to continually be redundant were eliminated from the revised version of the CASP.

Amendments to the prototype were made as a result of running the pilot study, taking into account the degree of reliability on each subtest and the pattern of response obtained for each question.

Several methodological problems arose from the pilot study:–

1. The random sampling method gave a high proportion of high ability subjects. This was particularly noticeable in the sample from the centres. It was therefore decided that in the main study the sample would be randomly selected from those clients who had already been identified as having a 'communication difficulty'.
2. The effectiveness of the three-way comparison on the staff questionnaire could have been enhanced if it had been conducted as a five-way analysis. However, this alteration to the design was not made for the main study as it was considered to be too time consuming for the staff, who would have had to complete five questionnaires each.

THE MAIN STUDY – May to September 1986

Sampling

Eight adult training centres and two hospitals were selected from four regions of Scotland and four centres and two hospitals in England were included, giving a total of 16.

Training Centres

All centres received regular input from a speech therapist. They varied in all other respects in order to represent as wide a range of centres as possible. Each centre accommodated between 60 and 100 clients. The age range was 18 – 65 years. Staff/client ratio ranged between 1:7 and 1:10.

The Hospitals

The hospitals were of varying sizes; the largest accommodated 450 and the smallest 100. The age range was 17 – 85 years. Staff to resident ratio was between 1:7 and 1:10. Mean length of stay was 38 years.

The procedure was identical to that used in the pilot study apart from the amendments to the sampling outlined above. In four of the centres and one hospital, inter-rater reliability could not be obtained, as there was only one therapist available. In these centres, Parts 1 and 2 of the experiment were executed. In the remaining 11, Parts 1, 2 and 3 as outlined in the pilot study were executed. A total of 106 subjects were assessed during the main study.

RESULTS

Percentage agreements between speech therapists and staff members on the communicative rating scale were calculated (see Figure 1).

FIGURE 1 – RELIABILITY FIGURES FOR COMMUNICATIVE FUNCTION RATINGS

Communicative Functions	Therapist – therapist (% agreement)	Therapist – key worker (% agreement)	Therapist – instructor (% agreement)
Giving information	99	70	67
Initiating	87	78	75
Responding to questions	81	78	77
Describing events	96	71	69
Describing feelings	89	75	70
Shows interest in comm.	96	80	76
Talking to self	(insufficient data)	56	50
Telling jokes	..	72	72
Maintains eye contact	94	75	77
Stands at correct distance	97	82	85
MEAN	92	74	72

Pearsons Product Moment correlations between therapists were computed (see Figure 2) and the mean scores for the high, mid and low ability subjects were obtained.

**FIGURE 2 – RELIABILITY COEFFICIENTS FOR THE CASP SUBTESTS
PEARSON PRODUCT MOMENT CORRELATIONS**

GROSS	0.846												
FINE		0.760											
RHYTHMS			0.550										
DIGITS				0.699									
VOC1 CO					0.895								
VOC1 EX						0.871							
VOC2 CO							0.825						
VOC2 EX								0.781					
FUNCT									0.543				
SC1										0.801			
SC2 CO											0.741		
SC2 EX												0.627	
	GROSS	FINE	RHY	DIGS	V1CO	V1EX	V2CO	V2EX	FUNCT	SC1	SC2	SC2	

RELIABILITY COEFFICIENTS FOR THE CASP APPENDIX SUBTESTS

PERF	0.597				
REPETIT		0.550			
COLOUR			0.773		
CLASSIF				0.737	
SIGNS					0.795
	PERF	REPETIT	COLOUR	CLASSIF	SIGNS

Reliability Ratings

The results revealed a high level of agreement between therapists. Low positive correlations were obtained for certain subtests: copying rhythms $r = 0.550$, copying digits $r = 0.669$, comprehension of function $r = 0.543$, performance $r = 0.597$ and sentence repetition $r = 0.550$. High positive correlations were obtained for all the remaining subtests. In addition, percentage agreement between therapists on the communicative function rating scale was high (mean 92) (see Figure 1 for a summary of high positive correlations). A similar pattern was found in the correlation coefficients obtained on the test retest data.

Frequency distributions and mean scores for high, mid and low ability subjects revealed an even spread of scores on those subtests which had high positive inter-rater and test retest reliabilities. Subtests with low correlations (rhythms, digits, performance and repetition) had either positively or negatively skewed distributions.

Finally, the level of agreement between staff and speech therapists on assessment of clients use of communication skills was above 70% on all but one of the communicative functions. Key workers and speech therapists agreed more often than did speech therapists and non-key workers.

DISCUSSION

The principle aim of this research was to determine whether or not a reliable assessment procedure could be developed to measure the communicative abilities of adults with a mental handicap. The results collated so far confirm this as a realistic goal.

Although the use of untrained staff in the assessment of communication skills has met with some controversy both in the literature and in the clinical field, the concept of joint assessment between the speech therapist and care staff has emerged as central to the philosophy behind the CASP. Evidence of untrained staff giving information which is unreliable when compared with the professionals assessment has been cited as a reason for excluding them from the initial stages of the assessment procedure. Analysis of the present data does not support this however. The reliability ratings for Section 1 of the staff questionnaire were high. Indeed, in the majority of the assessments, the staff were providing additional information which was not available to the therapist. An example of this is their ability to provide knowledge on the more informal uses of language such as telling jokes or talking to self. Additional information was also provided in Section 2 of the staff questionnaire, where the key worker was found to be the most reliable source. It would seem that analysis of the communicative abilities of adults with a mental handicap can be carried out with the aid of people who have not had any previous training in assessment.

In these studies initial comparisons between the performance of subjects living in hospitals and those attending adult training centres in the community revealed large differences. The hospital group scores were poorer overall, particularly on vocabulary and sentence comprehension subtests and ratings on communicative functions. Additional research will be required to identify:—

- a) exactly why these differences are occurring.
- b) to establish whether the CASP can show differences in communicative ability amongst a group living in hospital and a group living in the community who are matched on age and ability level.

A further period of research is at present underway which also aims to establish within population norms for the communicative abilities of mentally handicapped adults of differing age and ability levels from CASP assessments.

Therapists and care staff using the CASP procedure have found it to be a useful clinical tool. It has the potential to be used to assess adults in hospital who are being prepared for living in the community and thereby provide a sensitive measure of communicative ability which is essential to any deinstitutionalisation programme. The CASP also has the potential to be used with mentally handicapped adults attending adult training centres — to provide guidelines for improving communicative abilities and to identify those who do not require any special teaching.

SUMMARY

A Pilot version of a language and communication assessment procedure suitable for use with the ADULT mentally handicapped has been devised. This assessment, known as the Communication Assessment Profile (CASP) is the first of its kind designed specifically for use with this population. It requires the involvement of specialist staff and care staff making a joint assessment of the client and using this as a basis for planning intervention strategies. 146 subjects from 17 adult training centres and 4 mental handicap hospitals in Scotland and in England were assessed on the CASP between February and October 1986. 36 Speech Therapists and 110 care staff were involved in carrying out the assessments. Results indicate that CASP is a reliable measure of communicative ability. A further period of research is currently underway in order to confirm these results with a wider population and to validate CASP against existing assessments.

ACKNOWLEDGEMENTS

This research was funded by the Greater Glasgow Health Board, the Scottish Society for the Mentally Handicapped and the AJAHMA Trust. Further research is currently being funded by the Scottish Home and Health Department (K/MRS/50/C981). The author gratefully acknowledges the help of all clients, care staff and speech therapists who took part in the study. Thanks are also due to Christine Lawler for her help in the preparation of this paper.

REFERENCES

- BLUNDEN, R. (1976) Research and Development of Services to the Mentally Handicapped. *Teaching and Training XIV*, pp.1281-36.
- HOGG, J. & RAYNES, N. B. (1986) *Assessment in Mental Handicap: A Guide to Checklists, Tests and Batteries*. London: Croon Helm.
- KIERNAN, C. & JONES, M. (1982) *Behaviour Assessment Battery*. Windsor: NFER Nelson.
- LEUDAR, I. & FRASER, W. I. (1985) How to Keep Quiet: Some Withdrawal Strategies in Mentally Handicapped Adults. *J. Ment. Defic. Research* (29) pp.315-330.

- OWINGS, N. & GUYETTE, T. W. (1982) Communication Behavior Assessment & Treatment with the Adult Retarded: An Approach. *Speech & Language: Advances in Basic Research & Practice* (Vol. 7). Academic Press.
- PICKETT, J. M. & FLYNN, P. T. (1983) Language Assessment Tools for Mentally Handicapped Adults: Survey and Recommendations. *Mental Retardation* (21) (6) pp.244-247.
- REYNELL, J. (1969) *The Developmental Language Scale*. Slough: NFER Nelson.
- SNYDER, L. S. (1984) Communicative Competence. In R. L. Schiefelbusch and J. Pickar. *The Acquisition of Communicative Competence*. University Park Press.
- STALLARD, A. & DICKENS, P. I. (1986) *Assessing Mentally Handicapped People: A Guide to Care Staff*. Windsor: NFER Nelson.
- WHELAN, E. & SPEAKE, B. (1977) *Adult Training Centres in England and Wales*. London, National Association of Teachers of the Mentally Handicapped.