

COPING AND VOCATIONAL SKILLS OF MENTALLY HANDICAPPED ADULTS

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Whilst the assessment of skills and abilities has been a stated priority within Adult Training Centres for a number of years, accurate descriptions of the population attending Centres has been difficult. The National Survey of ATCs in England and Wales (Whelan and Speake, 1977) showed that a wide variety of assessment procedures and instruments were used allowing minimal opportunity to compare abilities across Centres.

Generally, Centres are described as catering for severely mentally handicapped individuals, although increasingly, trainees (students) are admitted at the two extreme ends of the mental handicap continuum — the profoundly mentally handicapped, requiring special needs provision, and the mildly handicapped who formerly might have secured a place in open or sheltered employment or on work experience schemes.

THE INVESTIGATION

An attempt to quantify more systematically both the 'coping' and 'vocational' skills of a large number of ATC trainees was possible during a study which adopted an action research approach (Cunningham, 1976), and was concerned with developing and evaluating habilitation technology for use with mentally handicapped and developmentally delayed adolescents and adults (Whelan and Speake, 1983).

Prior to the application of teaching packages, 'Field Trials' Centres participating in the research were required to provide baseline data on clients using two instruments: the *Scale for Assessing Coping Skills* (Whelan and Speake, 1979) and the *Work Skills Rating Scale* (Whelan and Schlesinger, 1980). These instruments and their scoring methods are briefly described below:

The Scale for Assessing Coping Skills covers 36 items related to independent functioning in the community. Each item (from the 3 main groupings: self-help, social-academic and interpersonal) consists of 5 elements, (a) to (e), totalling 180 elements overall. Seven columns are presented against each element, as seen in Figure 1.

Ability scores may be derived for each of the 36 items by giving 2 points for each of the 5 elements of the item that the individual being assessed can do without help, 1 point with help, and zero points for each element he/she cannot yet do. Thus, possible scores for each item range from a maximum of 10 to a minimum of 0 points — a potential overall score of 360 points.

Sub-scores may also be calculated for each of the three sections of the scale: self-help, social-academic and interpersonal. In view of the different numbers of items in these three sections (18, 10 and 8, respectively), the sub-scores are best expressed in percentage form, a maximum of 100% being attainable in each. In the present study, the scoring method also took account of any 'don't knows' which were encountered, eliminating any cases where this exceeded 25% of items. In the remaining cases, the score for that item was computed as an 'adjusted score' — scaled up to that which might have been expected for the item on the basis of scores achieved on those elements for which information was available.

Figure 1:

Sample item from the 'Scale for Assessing Coping Skills'.

	1 Can do without help or super- vision	2 Can do but only with help or super- vision	3 Cannot yet do	4 Do not know whether he can do this	5 Uses the ability an adequate amount	6 Does not use this an adequate amount	7 There is no opportu- nity to do this
SELF HELP							
1. Selection of clothing							
(a) Selects own clothes from drawer or wardrobe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Chooses clothing and footwear suitable for weather conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Chooses clothing and footwear appropriate to occasion (e.g. work, party)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Shows personal preferences and awareness of fashion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Locates clothing/footwear shops or departments and knows own sizes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Work Skills Rating Scale is a 24 item scale designed to cover the important areas related to success as a worker. Each item is clearly defined and then described at five levels, one of which is selected (by ticking) as best describing the individual's current performance. A sample item from the scale is shown in Figure 2.

Figure 2:

Sample item from the 'Work Skills Rating Scale'

5. SPEED

Volume of work produced in relation to an average worker on the same task

- 1. The amount of work he produces is always *far below the level of an average worker* and his performance does not increase with incentives.
- 2. Output usually fails to reach the level of an average worker but with special stimulation it may sometimes be increased.
- 3. Output generally reaches acceptable industrial levels.
- 4. Usually produces *more than* established norm especially when there is external incentive.
- 5. Habitually produces more than established norm, even when no external incentives exist.

For each item, a score may be given corresponding in value to the *level* ticked (from 1 to 5), resulting in an overall possible score of 120 for the 24 items. In the study reported here, total scores were not computed but scores on individual items were obtained.

Data on reliability and validity of the two instruments is found elsewhere (Speake and Whelan, 1977, and Whelan and Speake, 1984).

RESULTS

For this investigation, SACS data was collected on 1532 trainees, and WSRS data on 1272 trainees, sampled so as to ensure a cross section of the 2775 trainees on the registers of the 28 Centres involved.

Several analyses were conducted on the data and these are reported now under separate headings.

Overall Levels of 'Coping Skills' across Centres

Median scores and the range of scores were computed for males and females in the main sections¹ of each Centre involved, to examine whether ability ranges were similar across Centres in the sample or whether some Centres had higher or lower functioning trainees than others. In fact, it was found that the 'typical' ATC had trainees with a very wide range of ability, from very low levels of functioning (scoring less than 20% on SACS) to very high levels (scoring over 90%), with median ability levels ranging from 50% to 70%. The only substantial exception was a Centre in which the median ability level was much lower (32%), and 2 Centres where there was an absence of very low-functioning students and a correspondingly high ability level (74% to 80%). Overall, the range of scores indicates that Centres selected a fair cross-section of trainees from within their main section.

Scores on subsections of the Scale

A further analysis was carried out on SACS data to compare attainments of trainees across subsections of the scale: self-help, social-academic and interpersonal. It was expected, in the light of earlier data from the National Survey of ATCs, that trainees would be found to be relatively more competent in the self-help area.

Data was analysed separately for each of the three main subsections and for the total instrument for males and for females, both separately and combined, using adjusted scores.

The distributions of scores for males and females on each subsection of the scale were tested using the Kolmogorov-Smirnov two-sample test. Table 1 summarises the analyses on a total of 1385 individuals (after eliminating those with 25% or more 'don't knows'), and it can be seen that none of the distributions differed significantly between males and females. Thus, neither males nor females were found to have significantly higher or lower levels of attainment in respect of the three main sections of the Scale. (Additional tests for significant differences between males and females were also carried out on the items ticked 'Don't know', and again no significant differences between the sexes were found).

An important finding of Table 1 concerns the overall differences in attainments across the 3 sections of the Scale. The mean percentage for the three sections of the scale in Table 1 were 64.9%, 45.5% and 55.2% for self-help, social-academic and interpersonal areas, respectively. This pattern, including higher relative attainments in the self-help section supports the earlier findings of the National Survey which was based on staff assessments on over 24,000 individuals. These differences may be clearly seen in Figure 3 which presents the percentage of trainees achieving scores distributed across ten percentile groupings (from 0% to 100%) for the three sections of the Scale.

1. Note: Centres were instructed to omit individuals designated as 'special care' (profound handicap) from the sample selected for assessment.

% of trainees
with the score

Figure 3:

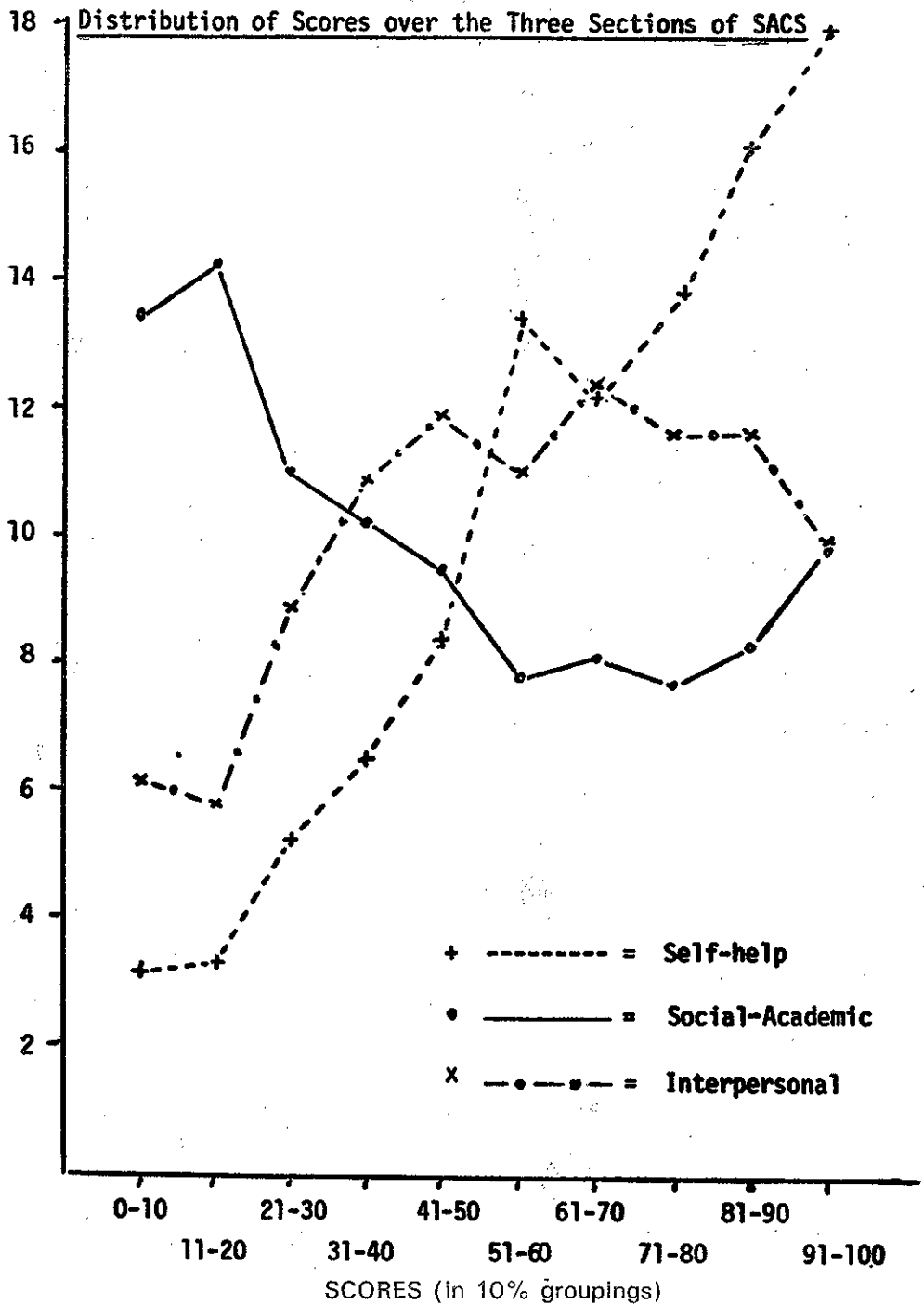


Table 1:
Summary data on attainments on the SACS

		<i>M</i>	<i>F</i>	<i>Both</i>
Self-help <i>D</i> =0.064 <i>CV</i> 5% = 0.075 (NS)	N	692	677	1411*
	Mean	63.7	66.1	64.9
	Median	66.4	71.2	68.4
	SD	25.091	24.911	25.128
	<hr/>			
Social-Academic <i>D</i> =0.056 <i>CV</i> 5% = 0.072 (NS)	N	728	706	1483*
	Mean	44.8	46.2	45.5
	Median	41.2	41.5	41.6
	SD	30.531	29.590	30.045
	<hr/>			
Interpersonal <i>D</i> =0.050 <i>CV</i> 5% = 0.072 (NS)	N	637	616	1301*
	Mean	54.5	56.0	55.2
	Median	55.4	56.3	55.9
	SD	27.234	25.600	26.485
	<hr/>			
Total Instrument <i>D</i> =0.043 <i>CV</i> 5% = 0.074 (NS)	N	665	671	1385*
	Mean	56.1	58.4	57.2
	Median	57.6	60.4	58.9
	SD	25.684	24.774	25.297
	<hr/>			

* = range between 84.9 and 96.8% of the sample.

Scores on individual Scale items

Whilst the foregoing analysis may be useful to staff in overall curriculum planning, it remains critical to examine attainments at individual scale item level to determine priorities.

Tables 2, 3 and 4 present the mean percentage of trainees, male and females separately, for items in the self-help, social-academic and interpersonal skill sections respectively, whom staff assessed as being able to carry out each item *without help or supervision* (i.e. ticked under column 1 of the Scale). The mean percentages of trainees have been calculated by collapsing the data across the five elements ((a) to (e)) of each item.

An overall rank is presented in column 3 of each Table, the highest rank corresponding to the highest overall percentage of males and females who have that particular ability.

Whilst self-help has been identified as the section with the highest overall attainments levels, Table 2 clearly shows that, even here, only 3 items have been achieved by over 70% of male or female trainees. These highest ranking items are those of a personal nature — being able to dress/undress oneself, toilet oneself, and eat in an acceptable manner. In contrast, skills related to more independent functioning, particularly within the community,

have been achieved by less than a third of all trainees (food and drink preparation, shopping, and local transport).

Table 2:

Attainments in 'Self Help': Mean Percentage of Trainees able to do this without help or supervision.

<i>Items</i>	<i>Male</i>	<i>Female</i>	<i>Rank</i>
1. Selection of clothing	46.3	48.8	10
2. Undressing/dressing	85.4	83.8	1
3. Use of toilet	84.8	81.6	2
4. Personal hygiene	55.2	57.8	6
5. Grooming and appearance	54.6	46.8	7
6. Care of clothing	35.2	46.2	12
7. Food and drink preparation	26.0	32.8	17
8. Setting/clearing table	56.2	68	4
9. Table habits	72.2	77.4	3
10. Washing up	54.4	67.8	5
11. Making the bed	40.4	47.4	11
12. Tidying the room	35.8	44.6	13
13. Leisure at home	51.8	49	8
14. First aid and health	35.6	31.8	15
15. Community knowledge	52.6	46	9
16. Local transport	29.2	25.6	18
17. Shopping	30.2	29.8	16
18. Eating out	34.2	33.4	14

Male (N=748) Female (N=735)

Attainments in the social-academic section are summarised in Table 3 where it can be seen that only in 'communication' was a high percentage of trainees assessed as competent. Again, less than one third of trainees were scored as competent in areas useful to more independent functioning in the community, particularly use of number and use of money.

Somewhat higher percentages of trainees have assessed abilities in the interpersonal skill areas of the Scale (Table 4), and the range of ability is not as wide as in the social-academic area. 'Social graces' ranks highest for numbers of trainees, whilst 'use of telephone' and 'sexual knowledge and behaviour' have only been attained by one third or fewer trainees.

Table 3:

Attainments in 'Social Academic': Mean Percentage of Trainees able to do Items without Help or Supervision.

<i>Item</i>	<i>Male</i>	<i>Female</i>	<i>Rank</i>
19. Communication	71.2	72.2	1
20. Reading	28.6	31.6	6
21. Writing	22.6	27.0	8
22. Number	41.4	40.8	4
23. Use of number	22.0	21.2	10
24. Telling the time	30.0	27.4	7
25. Concept of time	41.2	41.4	3
26. Money	38.6	34.8	5
27. Use of money	23.8	20.0	9
28. Colour recognition/use	48.2	55.8	2

Male (N=748) Female (N=735)

Table 4:

Attainments in 'Interpersonal': Mean Percentage of Trainees able to do Items without Help or Supervision

<i>Item</i>	<i>Male</i>	<i>Female</i>	<i>Rank</i>
29. Personal knowledge	46.4	47.6	4
30. Conversation	48.6	51.6	2
31. Social graces	58	62.8	1
32. Friendships	45.4	49.8	3
33. Leisure — Group activities	37.2	34	6
34. Telephone	25.2	23.2	8
35. Responsibility	36	35.8	5
36. Sexual knowledge/behaviour	33.4	33	7

Male (N=748) Female (N=735)

Vocational Skill Attainments

As stated earlier, the *Work Skills Rating Scale* was applied to 1272 trainees. In order to enable a rank order of attainments across the 24 items of the WSRS to be computed, mean scores for each item (out of 5 points) were derived for males and females. Table 5 presents these scores and the subsequent ranking of items and it can be seen that, overall, male and female rankings over the items do not differ much, with the exception of adaptability to environment (males being slightly better) and supervision needed (females needing slightly less).

It is encouraging to note that 18 of the 24 items were rated as close to the mid-point of the Scale (a score of 3) which was designed to correspond to the level of skill expected on each item by the average unskilled worker in industry.

Table 5:
Rank order of attainments on the WSRS, based on mean scores

<i>Item</i>	<i>Score</i>		<i>Rank</i>	
	<i>M</i> <i>N=613*</i>	<i>F</i> <i>N=615*</i>	<i>M</i>	<i>F</i>
1. Consistency of work performance	2.77	2.87	12	11
2. Job adaptability	2.79	2.82	11	13
3. Adaptability to environment	3.03	2.88	5	10
4. Supervision	2.67	2.89	13	8.5
5. Speed	1.97	2.10	23	23
6. Quality/accuracy	2.88	2.97	9	6.5
7. Checking work	2.52	2.59	18	16
8. Level of task undertaken	1.94	1.99	24	24
9. Care and safety in use of equipment	2.49	2.51	19	18.5
10. Exercising foresight and initiative	2.11	2.13	22	22
11. Use of known abilities	2.53	2.62	16.5	15
12. Attendance and punctuality	3.50	3.44	1	2
13. Comprehension	2.63	2.71	15	14
14. Memory	2.89	2.89	8	8.5
15. Expressive communication	2.90	2.97	7	6.5
16. Emotional stability	3.21	2.98	3	5
17. Decision making	2.34	2.35	20	20
18. Concentration	2.80	2.84	10	12
19. Working under pressure	2.53	2.51	16.5	18.5
20. Attitude to authority	3.17	3.20	4	3
21. Relations with colleagues	2.93	3.03	6	4
22. Personal appearance and hygiene	3.38	3.56	2	1
23. Responsibility	2.23	2.30	21	21
24. Self confidence	2.65	2.55	14	17

*Total N<1272 since Scales were deleted from analyses if individual items were missed out.

DISCUSSION

This investigation sought detailed information on the coping and vocational skills of over 1200 individuals attending ATCs. The results show clearly that Centres continue to serve a very wide range of individuals in terms of functional abilities. Whilst, overall, more competency is evident in self-help skills amongst the population (than in interpersonal or social-academic skills), this finding may mask the very low levels of functioning found on individual skill items. The population presents itself as one with very little ability to function independently in the community — particularly using the traditionally available means of transport, being able to shop, prepare food, and so on.

As expectations of mentally handicapped individuals increase, particularly regarding progression to more independent types of living accommodation, and as self-expectations increase with the growth of self-advocacy (Crawley, 1983; Williams and Schoultz, 1982), it is clear that there are considerable priorities for those responsible for training. With systematic assessment, it is possible to be more precise in identifying these priorities.

The results of this investigation should alert policy makers to the task facing staff in ATCs in developing such skills in their trainees. There are clear implications for the training and support which staff require for undertaking this demanding role, a role which is in accordance with official government policy (DHSS, 1980) concerning the function of ATCs.

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