

SYMPOSIUM ON PREPARING FOR LIFE IN THE OPEN COMMUNITY

I—THE EFFECT OF SECONDARY HANDICAPS ON THE EMPLOYMENT ADJUSTMENT OF EDUCABLE MENTALLY HANDICAPPED ADOLESCENTS IN SCOTLAND

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I. REVIEW

Marked physical defects are perhaps so obvious an impediment to employment adjustment that surprisingly little emphasis has been placed on their value as predictive indices (Windle, 1962). Although at least three studies have found the possession of a physical defect to be significantly related to follow-up status (Lee, Hegge and Voelker, 1959; Reynolds and Stunkard, 1960; Guralnick, 1964), most studies have shown either that physical defects have no pronounced deleterious effect (O'Brien, 1952; Krischef, 1957; Shafter, 1957) or that the effect has been marginal (Reynolds and MacEachern, 1956).

While Krischef (1957) was unable to find any direct relationship between employment adjustment and the possession of a physical handicap, he did note that successful outcome appeared to be prejudiced by the presence of disfiguring handicaps (i.e., facial stigmata). This finding has some support in a study undertaken earlier by Robinson and Pasewark (1951) in which it was suggested that disfiguring handicaps might play an important part in the degree to which a subject was accepted not only within his home and community but also his place of work. Warren (1961) and Kolstoe (1961) also found appearance to be important, indeed Kolstoe argued that the appearance of a handicap (e.g., a hearing aid) could be more detrimental to adjustment than the handicap itself. A similar finding was noted by Saenger (1957) who indicated that the workers in his sample who had a "mongoloid" appearance might have found employment had they not been stigmatised by their conspicuous physical features.

From a review of the existing literature it is evident that no surveys have been undertaken in Britain which have sought to examine the relationship between the possession of secondary handicap and employment adjustment. The research study described in this paper was carried out in an attempt to remedy this deficiency in our present knowledge.

II. METHOD

A. Criteria of employment adjustment

Employment adjustment was based on two criteria which were applied over a three-year follow-up period. The two criteria selected were: (a) the number of jobs held by a subject and (b) the number of months a subject was unemployed. Each criterion was divided into a sixfold classification, and in order to determine the level of employment adjustment attained the criteria were combined (Table 1). The rationale underlying the selection of these criteria is presented in an earlier paper (Jackson, 1968).

The employment history of each subject was obtained from three sources: (a) the subject and subject's parents; (b) the Careers Office for data from the subject's 16th to 18th birthday; and (c) the Department of Employment for data from

the subject's 18th birthday onward. The general unemployment rate for the survey area was consistently the lowest in Scotland throughout the period of the follow-up; the unemployment rate for young persons (i.e., persons aged 15 to 18) remained stable at the 2% level.

TABLE 1
Criteria of Employment Adjustment

Criterion I Number of Jobs		Criterion II Months Unemployed				
A	≤ 3	A	≤ 3.0			
B	4-6	B	> 3.0	≤ 6.0		
C	7-9	C	> 6.0	≤ 9.0		
D	10-12	D	> 9.0	≤ 12.0		
E	> 12	E	> 12			

Level of Adjustment							Criterion II
	Level						
Adjusted	0	AA	BA	CA	DA	EA	
	1	AB	BB	CB	DB	EB	
Borderline	2	AC	BC	CC	DC	EC	
	3	AD	BD	CD	DD	ED	
Non-adjusted	4	AE	BE	CE	DE	EE	
	5	unemployable					

B. Prognostic variables

The following prognostic variables were selected (Heber, 1961): (1) speech disability: disability in vocalisation (e.g., stammer); (2) visual disability: disability in responding meaningfully to visual stimulation (defective vision remedied by conventional corrective lenses excluded from this category, presence of strabismus included); (3) auditory disability: disability in responding meaningfully to auditory stimulation; (4) motor disability: disability either in gross or fine motor co-ordination (e.g., spasticity); and (5) convulsive disorder: occurrence of major motor seizures, petit mal seizures or other convulsive disorders.

All the records from which the prognostic data were taken had been compiled by qualified diagnosticians. Throughout the period that the sample population attended special school, there was very little change in the identity of the personnel

administering the tests and compiling the reports, so that a measure of consistency was introduced into the procedures adopted and the assessments made.

III. SAMPLE POPULATION

The sample was drawn from those subjects who left the six-day special schools in the city of Edinburgh during the four years 1959 to 1962. From a total possible sample of 221 subjects, completed records were obtained for 191 (86.4%): 108 male; 83 female.

IV. DISCUSSION OF RESULTS

A. Incidence of secondary handicaps

No less than 52.8% of the male sample (N=108) and 53.1% of the female sample (N=83) possessed at least one further disability in addition to mental handicap. This high prevalence of secondary handicap clearly highlights the marked heterogeneity of the educable mentally handicapped (EMH) population. In his analysis of possible causes of backwardness, Burt (1937) found that 57.0% of his London sample (N=391) and 52.8% of his Birmingham sample (N=196) also suffered from specific physical handicaps (e.g., speech, motor, visual and auditory disabilities). While in a more recent study undertaken in Wales by Williams and Gruber (1967), it was found that no less than 63% of their ESN sample (N=161) had additional handicaps. This slightly higher percentage may have resulted from the inclusion of **maladjustment** and **poor physical condition** as additional handicaps. The Welsh study also confirms the tendency noted in the present investigation for additional handicap to be associated with lower measured intelligence (Table 2).

TABLE 2
Analysis of Significant Differences Between Means of Measured Intelligence
(Two tailed t test)

	\bar{M}	σ	N	p<
Male sample (N=106)*				
No additional handicap	66.14	8.06	50	
Additional handicap	62.45	10.73	56	.05
Female sample (N=83)				
No additional handicap	60.97	9.12	39	
Additional handicap	55.98	8.50	44	.02

*No IQ known for two subjects.

One study which appears to provide contradictory evidence was conducted in Edinburgh with a sample population drawn from children aged 7—14 (N=406) (Drillien, Jameson and Wilkinson, 1966). In assessing the relationship between physical disability and clinical types of mental handicap, it was found that while almost 95% of those with IQs below 30 (N=71) and 78% of those with IQs between 30 and 55 (N=147) suffered from at least one physical disability, only 37% (N=188) of those with IQs from 55-69 had an additional handicap. This low prevalence rate is misleading. Although the three IQ categories selected by Drillien et al correspond with the recommended IQ ranges for the three clinical types of mental handicap (i.e., untrainable, trainable and educable) recognised in Scotland (SED, 1961), it would be wrong to infer that the low prevalence rate found in the "educable" category (IQ 55—69) accurately reflects true prevalence in the EMH population as a whole. The simple fact is that not all pupils with IQs in the range 55—69 are classified as EMH and not all pupils in EMH schools have IQs which fall within this range. For example, the IQs of subjects in the present study extend from 37 to

88! Further confirmation of the wide range of IQs to be found in EMH (or ESN) populations have been noted in a number of studies (Chazan, 1964; Williams and Gruber, 1967).

That this particular finding has occasioned confusion is evident from a recent review by Conley (1973); where not only does the reviewer accept this low prevalence rate but suggests that the figure of 37% may actually overstate true prevalence within an EMH population. Existing evidence, however, clearly contradicts Conley's estimation, for available British studies show that approximately one-half of an EMH population can be expected to possess **at least** one further handicapping condition.

The high prevalence of physical handicap in EMH populations has encouraged at least one commentator (Henderson, 1960) to enquire whether in fact most multiply handicapped pupils are indeed mentally handicapped. He makes the point that not only is it difficult to assess the capabilities of multiply handicapped children, in the absence of tests designed and standardised for that purpose, but that where tests have been applied, there is evidence of a wide variability in functioning. One consequence of this situation is that many multiply handicapped children are unnecessarily referred to special schools, where the teachers are ill-equipped to deal with the multiplicity of additional handicaps which confront them in the classroom.

Although speech, auditory, visual, motor and convulsive disabilities have all been recognised as categories deserving special educational treatment **in their own right** (Handicapped Pupils and Special Schools Regulations, 1959), it is clear that whenever these disabilities occur in association with educational retardation, such pupils tend to be referred to EMH special schools. This procedure neglects not only the possibility that the retardation may result from the presence of the physical handicap, but the certainty that attendance at an EMH special school will rarely lead to the provision of the kind of special educational treatment required to meet the child's particular and individual needs.

That the presence of physical handicaps has been found to be associated with lower measured intelligence (Williams and Gruber, 1967) perhaps tells us less about the intellectual ability of the multiply handicapped than the inadequacy of the tests which have been applied. Further, the fact that the multiply handicapped in the present study tend to have poorer employment records should not necessarily be interpreted to mean that measured intelligence has any prognostic significance, for there is no evidence that the particular kinds of ability measured by IQ tests (or indeed any other tests of **educational** attainment) have any relevance in predicting successful employment adjustment (Cobb, 1972). That the employment records of the multiply handicapped tend to be poor may stem, in part, from the failure of the special schools to provide appropriate remedial treatment.

TABLE 3
Incidence of secondary handicap

Disability	Male (N=108)		Female (N=83)		Combined (N=191)	
	N	%	N	%	N	%
A1 Speech	39	36.1	23	27.7	62	32.5
2 Visual	13	12.0	12	14.5	25	13.1
3 Auditory	11	10.2	12	14.5	23	12.0
4 Motor	10	9.3	5	6.0	15	7.9
5 Convulsive	7	6.5	6	7.2	13	6.8
B1 No secondary handicap	51	47.2	39	46.9	90	47.1

B. Relationship between secondary handicap and employment adjustment

(a) Speech disability

While it is clear that there are significantly more speech defective boys than girls, it is the speech defective girl who appears to be more adversely affected in employment. This finding is perhaps surprising. If speech disability is an impediment to adjustment one might reasonably expect it to be significantly related to adjustment in both the male and female samples. Two possible interpretations of this finding are advanced.

First, there is some evidence that the speech defective girls in this study were significantly less intelligent than those girls free of the disability, so that lack of "intelligence" in association with speech disability may have occasioned the poorer adjustment. This explanation, however, has to be seen in the context of the earlier reservations made concerning the utility of IQ tests with multiply handicapped pupils.

Second, most of the female subjects were engaged in employment which necessitated a high degree of social interaction with their fellow workers, the majority being employed as semi-skilled operatives working on production lines. In fact, 43% of all the jobs (N=237) held by the girls in the three-year follow-up period were in the food processing industries of Edinburgh. There are two characteristics of this type of employment which are significant. First, the work is undertaken in close physical proximity to others thus providing the opportunity for, and the expectation of, spoken encounters. Second, such work usually entails membership of a clearly defined group, acceptance within which depends on the display of behaviour deemed appropriate by that group.

In such a situation there seems little likelihood that a speech defective worker can "pass," the term Goffman (1963) has used to describe the tactic whereby an individual endeavours to disguise, conceal or otherwise avoid disclosure of a potentially discreditable fact. Whether or not eventual disclosure of a speech disability will actually be regarded as discreditable will depend largely on the group; however, even if a group is sympathetically disposed such a disclosure is likely to occasion some form of mild sanction (e.g., ridicule). Although a subject's response to sanctions, whether mild or severe, will vary, subsequent interaction with group members is likely to be characterised by some degree of tension and conflict. If no resolution of the stress is forthcoming then there is a strong likelihood of serious adjustment difficulties. However, as Goffman (1963) has indicated, there is always likely to remain a residual element of tension, for "the very mechanics of spoken encounters constantly redirect attention to the defect, constantly making demands for clear and rapid messages that must constantly be defaulted."

The factors which have been tentatively advanced to explain the greater vulnerability of the speech defective girl have perhaps less relevance for the boy, as the kinds of job commonly held (e.g., delivery boys) tend not to be locationally fixed, thus precluding the necessity for continuous social interaction within an established and stable work group.

The extent to which an individual is able successfully to avoid disclosure of a disability—or to pass—may also depend on its visibility or as Goffman (1963) has preferred to describe it, its "perceptibility" or "evidentness." It is therefore possible that the disabilities which pose the most serious threat to adjustment are those which an individual finds the greatest difficulty in concealing (e.g., motor, visual and speech disabilities).

Clearly the need to conceal a disability will vary depending on the extent to which an individual finds himself in situations involving continuous social interaction. The fact that the boys with speech and visual defects tended to be placed in

jobs demanding less frequent face-to-face interaction meant that they were less likely to have their attention—and the attention of others—constantly redirected toward their disability.

Thus, it may well not be the presence of a disability itself that constitutes an obstacle to adjustment as the effect that its disclosure has on those to whom it becomes perceptible or evident. For example, there is no obvious reason why the presence of a stammer, *per se*, should interfere with the efficient performance of jobs that do not demand a high level of oral fluency. Nor any reason why a squint should impair a worker's effectiveness on jobs that do not require an "acceptable" physical appearance. The critical factor affecting adjustment in both cases is likely to be the attendant stigma associated with the disability.

(b) Visual disability

As with other prognostic variables, visual disability is an undifferentiated category for it includes subjects suffering from marked refractive defects (e.g., hypermetropia, myopia and astigmatism) and strabismus. A distinction needs to be drawn between the two, for subjects suffering from a squint, unlike subjects with refractive defects, have a double handicap, the defect itself and the visual stigmata. The reasons which have been advanced to explain the greater vulnerability of the speech defective girl to employment failure would seem to apply with equal force to the visually defective girl. An important feature of the distribution of visual disability in the sample population was its close association with other physical defects, particularly speech and motor disabilities.

(c) Auditory disability

The possession of an auditory disability and its relation to employment adjustment presents a pattern inconsistent with that found for the other disabilities, for in few cases was the presence of a hearing handicap associated with poor adjustment. On the contrary, the aurally defective tended to be particularly well adjusted in employment. This may have resulted from the fact that in comparison with other disabilities, an auditory disability is (1) less perceptible or evident; (2) less likely to interfere directly with job performance; (3) more effectively remedied through the use of mechanical aids; (4) more easily concealed, particularly by the proficient lip-reader; and (5) the subject of greater public understanding, sympathy and tolerance.

(d) Motor disability

The critical factors adversely affecting the employment adjustment of the motor disabled were their inadequate powers of motor control and co-ordination, both of which abilities are essential for the successful performance of the most elementary and routine operative tasks. As few employers had either the facilities or the time necessary for giving the requisite training, and as no vocational rehabilitation schemes were available in the survey area, no assistance could be given. The severely incapacitating nature of the motor disability was exacerbated in many cases by the presence of additional handicaps, in particular visual and speech defects. Of the 15 subjects in the study classified as motor disabled most were suffering from varying degrees of spasticity. At the end of the three-year follow-up period, all the spastic subjects had been placed in sheltered employment.

(e) Convulsive disorder

Satisfactory adjustment for the epileptic subject also appeared to be less impeded by the inherent nature of the disorder than the stigma attached to it. A further problem confronting the epileptic worker appeared to be his over-dependence on his family. Fear that an epileptic attack might occur when their "child" was unaccompanied outside the home or at work was a cause of constant concern

TABLE 4

Relationship between secondary handicap and employment adjustment

Male (N=108)

Disability	N	Level of Adjustment		
		0-1	2-3	4-5
A1 Speech	39	21	0	18
2 Visual	13	5	1	7
3 Auditory	11	6	2	3
4 Motor	10	2	0	8
5 Convulsive	7	3	1	3
B1 No secondary handicap	51	29	11	11

A4 vs B1: $\chi^2=13.52$, $df=2$, $p<.01$

Female (N=83)

Disability	N	Level of Adjustment		
		0-1	2-3	4-5
A1 Speech	23	9	2	12
2 Visual	12	4	1	7
3 Auditory	12	11	0	1
4 Motor	5	3	0	2
5 Convulsive	6	2	0	4
B1 No secondary handicap	39	25	6	8

A1 vs B1: $\chi^2=6.65$, $df=2$, $p<.05$

A2 vs B1: $\chi^2=7.06$, $df=2$, $p<.05$

Combined (N=191)

Disability	N	Level of Adjustment		
		0-1	2-3	4-5
A1 Speech	62	30	2	30
2 Visual	25	9	2	14
3 Auditory	23	17	2	4
4 Motor	15	5	0	10
5 Convulsive	13	5	1	7
B1 No secondary handicap	90	54	17	19

A1 vs B1: $\chi^2=16.65$, $df=2$, $p<.001$

A2 vs B1: $\chi^2=11.66$, $df=2$, $p<.01$

A4 vs B1: $\chi^2=14.43$, $df=2$, $p<.001$

A5 vs B1: $\chi^2= 6.56$, $df=2$, $p<.05$

to the parents, especially as public understanding of, and sympathy for, epileptics is not sufficiently advanced to warrant confidence that prompt and appropriate assistance would be given in the event of a seizure. This dependence results in part from an over-anxiety felt by the parents who, consciously or not, tended to restrict their "children's" activities outside the home and also to a concomitant lack of confidence on the part of the epileptic which arose from this limitation and from the unpredictability of the next attack.

Conclusion

It is then possible to distinguish three basically different but not mutually exclusive kinds of handicapping conditions which may adversely affect employment adjustment. First, those handicaps which directly impair job performance (e.g., forms of motor disability which diminish motor control and co-ordination). Second, those handicaps which do not in themselves impair job performance and which are not readily perceptible but which carry a social stigma (e.g., epilepsy). Third, those handicaps which do not in themselves impair job performance but which are readily perceptible and carry a social stigma (e.g., squint, stammer).

One further point needs to be made. The presence of a physical handicap, particularly an "aesthetic" handicap (e.g., a squint) may lead indirectly to the disclosure that a subject had attended an EMH special school, a fact—again potentially discreditable—that many EMH subjects are very anxious to conceal. Follow-up studies have consistently shown that one of the most serious obstacles to adjustment is the frequently hostile or unsympathetic response from workers who learn that a workmate is "mentally handicapped." Although, in a sense, this reaction tends to be directed more at the stereotyped image of the "mentally handicapped" than at the stigmatised individual himself (who may possess few, if any, of the characteristic features of the stereotype), its impact nevertheless is profound and real.

Implications

This paper has sought to demonstrate not only the scale of the problem where over one-half the EMH population is multiply handicapped, but the acute predicament of the individual multiply handicapped adolescent who without the benefit of prior and appropriate preparation has to overcome unaided a succession of formidable obstacles to achieve an adequate level of employment adjustment. It is scarcely surprising that the chances of achieving satisfactory adjustment progressively diminish with the number of secondary handicaps possessed (Table 5).

TABLE 5
Relationship between number of secondary handicaps and employment adjustment

Level of adjustment	Male (N=108)				Female (N=83)				Combined (N=191)			
	No. of secondary handicaps				No. of secondary handicaps				No. of secondary handicaps			
	0	1	2		0	1	2		0	1	2	
0—1	29	18	8	55	25	19	4	48	54	37	12	103
2—3	11	6	0	17	6	1	1	8	17	7	1	25
4—5	11	13	12	36	8	14	5	27	19	27	17	63
	51	37	20	108	39	34	10	83	90	71	30	191

$\chi^2=11.59, df=4, p<.05$ $\chi^2=7.10, df=4, p<.05$ $\chi^2=16.27, df=4, p<.01$

There would seem to be an urgent need to review the present procedure which permits the referral of so many multiply handicapped pupils to EMH schools where their individual needs must of necessity be neglected. Apart from the inadequacy of the tests which are applied (Henderson, 1960), one suspects that the main reason for this high referral rate is the pressure exerted by primary teachers for the removal of the multiply handicapped from the ordinary school and the refusal of other special schools (e.g., schools for the deaf, blind) to accept pupils who are also educationally retarded, on the grounds that they present particular teaching problems for which their staff are not equipped. Serious consideration should be given either to the establishment of special units (if the pupil numbers justify it) or the provision of specially trained teachers for the ordinary schools who can deal with the unique problems of the distinct groups which are subsumed under the general category of "mentally handicapped" (i.e., speech defective-retarded, motor disabled-retarded, etc.).

The point has been already stressed that one of the main contributory factors leading to the inadequate adjustment of the mentally handicapped lies in their inability to deal satisfactorily with face-to-face encounters. In an earlier paper (Gibson and Jackson, 1974), it has been suggested that the status of a "normal" person may only be granted on the demonstrated possession of certain social skills. For example, an individual must know how to display the proper respect to others' identities; how to display the appropriate avoidance and presentation rituals and the proper respect for his own demeanour; how to make requests and denials without causing undue offence; and how to apologise and how to accept apologies gracefully (Goffman, 1963).

Adult interaction with adolescents who lack such skills is likely to be characterised by aggressive "face-work"—snubs, sarcasm, gossip and misrepresentation. It is the "mentally handicapped" child's frequent inability to focus on, to spell out what is relevant or his tendency to be too single-minded which often leads to the label, "mentally handicapped," being attached to him. He has not yet learned the skill of turning his attention to the right thing at the right time. The teaching of these skills or "recipes" is clearly of crucial importance, for only through their acquisition can the individual be accepted as "normal."

There is, therefore, a need for special schools to promote the development of such tactical abilities within the framework of a well-conceived social education programme. That a greater emphasis should be placed on the acquisition of social rather than purely educational skills arises from the fact that occupational failure results more often from social inadequacy than poor educational attainment (Cobb, 1972). For a social education programme to be really effective it would need to be closely and carefully integrated within a general programme of occupational preparation that laid an equally strong emphasis on the acquisition of basic job skills (e.g., manual dexterity). Such a training programme to have any value or meaning would need to be provided outside the distinctive ethos of the special school. The creation of separate vocational training centres, which would provide the EMH adolescent with an environment of transition and orientation within which he would be able to learn, accept and assimilate the more pragmatic, harsh and real values and norms found in open employment, might be one answer (Jackson, 1973).

If a multiply handicapped adolescent is to be given a training relevant to his particular needs then it follows that the greatest care should be exercised in the placement procedure to ensure that the skills acquired will be effectively utilised. Thus responsibility for placement should rest with someone who not only has an intimate knowledge of the strengths and weaknesses of the individual school leaver but has a thorough experience-based understanding of the demands of local industry.

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