

PRACTICAL USE OF THE GRIFFITHS SCALE IN OLDER CHILDREN

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ABSTRACT. Comparative scores from the Griffiths Extension Scale for Ss from five to eight years of age from two groups are presented. The experimental group was made up of children with cerebral palsy and the control was a group of normal Ss matched by age, sex and socioeconomic level. The scores were as expected in relation to normalization values for local populations, previously found by the Harvard-ICBF-Cornell Research Project on Malnutrition and Mental Development in Bogota, thus suggesting that the administration of this instrument can be, in practice, carried out for normal and abnormal Ss of school age under local conditions in Bogota, Colombia.

It is suggested that this psychometric instrument can be appropriately used in underdeveloped areas such as Bogota, not only for research but also for other purposes.

RESUMEN. Resultados comparativos de la Griffiths Extension Scale para Ss de cinco a ocho años de edad de dos grupos son presentados. El grupo experimental se compuso de niños que padecen apatía cerebral, y el control de un grupo de niños normales semejantes en cuanto a edad, sexo y nivel socioeconómico. Los resultados fueron los que se esperan en relación a valores de normalización para habitantes de la localidad establecidos previamente por el Harvard-ICBF-Cornell Research Project on Malnutrition and Mental Development en Bogotá, de esta manera sugiriendo que la administración de dicho instrumento puede ser, en práctica, llevada a cabo para Ss normales y anormales de edad escolar bajo condiciones locales en Bogotá, Colombia.

Se sugiere que este instrumento psicométrico puede ser propiamente usado en localidades subdesarrolladas tales como Bogotá, no solamente para fines de investigación sino para otros asuntos.

INTRODUCTION

The Research Project on Malnutrition and Mental Development (RPMMD) that is being carried out in Bogota, Colombia, requires the use of psychometric instruments, as an integral part of its design. For that purpose a battery has been assembled including scales based on the theories of cognitive development of Jean Piaget, as well as a traditional scale to measure intelligence. This latter is the Griffiths Scale of Intelligence for Babies² as well as its Extension for children from two to 8.4 years of age.³

The use of the two parts of the Griffiths Scale as a single measurement instrument requires intensive exploration of the Extension, on which the available literature is limited.

The integration of the Griffiths Scale allows the uninterrupted

coverage of every age group below eight years using the same instrument, and the scoring of subjects not only with a single General Quotient (G.Q.) but also by the scores of the different areas of psychological functioning (Locomotor, Personal-social, Hearing and Language, Eye-hand coordination, General Performance and Practical Reasoning), in the manner of a profile of performance.

The aim of this paper is to present data on the practical applicability of the Griffiths Scale to normal and abnormal Ss on the upper age range for which the scale was originally designed. The Ss are natives of Bogota, a prototypical South American city.

METHOD

Thirty subjects with the clinical diagnosis of cerebral palsy, arrived at by the neurologist of the institution where they were rehabilitated at the time of the study, were administered the Griffiths Scale by two of the authors (Rodríguez and Venagas). Both sexes were represented in almost the same proportion; all subjects were identified as members of low or very low social class, and their ages ranged from five to eight years.

The control group was made up of 30 normal subjects matched with the experimental group in age, sex and SES.

The following values were accepted as the normal ones for the general population of Bogota, Colombia. These data were taken from unpublished normalization studies carried out by RPMMD in Bogota.⁴

Sub-scale	X I.O.	S.O.
Locomotor	101	16.8
Personal-social	97	16.7
Hearing-Language	95	18.1
Eye-hand coordination	97	15.9
Performance	95	17.4
Practical Reasoning	94	15.7
GENERAL QUOTIENT	96	14.7

RESULTS AND DISCUSSION

It was considered important to report the findings since this was the first time that a comparison between normal and obviously abnormal subjects was carried out in the higher age ranges for which the integrated Griffiths Scale of Intelligence was devised. Furthermore, it was the first time, as far as we know, that this instrument was used on school-age population from an underdeveloped country. Significant findings in such a population may widen the field of use of the scale in similar socioeconomic areas.

A large difference was found between the two groups in all the sub-scales, as noted in Table 1. This difference was still present

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when the total sample was divided into three different age ranges, as shown in Tables 1 and 2.

As was expected, given the characteristics of the clinical picture of the abnormal subjects, the largest deficits were present in the Locomotor area, in which the scores were approximately one-half of those on the other sub-scales.

These findings suggest that the upper age ranges of the Griffiths Scale (the Extension) can be used for practical applications on both normal and obviously abnormal Ss, under the local conditions of Bogota, yielding scores compatible with the logical expectations for the examined groups.

The reported findings lend support to the hypothesis that the Griffiths Scale, as adapted by the Research Project on Malnutrition and Mental Development in Bogota, Colombia, may become an important psychometric instrument to be used not only in connection with this particular research but also for educational and other investigative goals.

TABLE 1

Differences in the scores of the sub-tests and G.Q. between a group of normal and a group of Cerebral Palsy subjects, examined with the Griffiths Scale of Intelligence, in Bogota, Colombia. Significance of such differences.

SUB-TESTS		Personal Social (B)	Hearing Language (C)	Eye-hand Coordin. (D)	Perform. (E)	Practical Reasoning (F)	General Quotient (G.Q.)
Normals	S	102	95	98	97	94	98
(n=30)	SD	+8.7	+16.6	+10.5	+15.6	+11.5	+8.9
C.P.	S	61	67	65	58	56	56
(n=30)	SD	+20.7	+17.8	+21.0	+23.4	+26.5	+25.8
Level of significance		.005	.005	.005	.005	.005	.005

S = Mean score values.

SD = Standard Deviation Differences were calculated by the Z test.

TABLE 2

Differences in the scores of the sub-tests and G.Q. between a group of normal and a group of Cerebral Palsy subjects, in three age ranges, examined with the Griffiths Scale of Intelligence in Bogota, Colombia. Significance of the differences.

AGE RANGES	SUB-TESTS	Locomotor (A)	Personal Social (B)	Hearing Language (C)	Eye-hand Coordin. (D)	Performance (E)	Practical Reasoning (F)	GENERAL Quotient (G)	
5-6	Normal (n=10)	S	107	104	99	95	99	89	97
		SD	± 11.0	± 11.8	± 7.3	± 12.6	± 8.9	± 17.0	± 11.8
	C.P. (n=10)	S	49	66	70	67	68	65	
		SD	± 31.8	± 16.9	± 25.0	± 20.5	± 14.6	± 18.4	
6-7 years	Normal (n=10)	S	103	104	93	96	96	92	97
		SD	± 12.0	± 16.0	± 9.1	± 12.6	± 12.6	± 11.9	± 10.5
	C.P. (n=10)	S	37	62	66	55	48	50	54
		SD	± 26.9	± 22.2	± 18.6	± 16.1	± 15.6	± 14.6	± 12.6
7-8 years	Normal (n=10)	S	101	98	95	101	97	99	99
		SD	± 9.4	± 9.3	± 9.7	± 6.4	± 9.3	± 10.3	± 5.8
	C.P. (n=10)	S	29	56	65	66	63	60	57
		SD	± 17.4	± 23.4	± 23.1	± 20.6	± 18.5	± 21.3	± 15.9

S = means score values

SD = Standard deviations

FOOTNOTES

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²Griffiths, R. *The Abilities of Babies*. The University of London Press, 1954.

³Griffiths, R. *Notes on the Administration of the Griffiths Mental Development Scale for Testing Children from Birth to Eight Years*. (Mimeograph booklet, 1967.)

⁴Cobos, F. and Guevara, L. General normalization of the Griffiths Scales in Bogota, Colombia. (Unpublished manuscript)