

ポリオ罹患学生の人格特性とスポーツに対する 態度に関する研究

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A STUDY OF POLIOMYELITIS STUDENTS PERSONALITY CHARACTERISTIC AND SPORTS ATTITUDE IN ADAPTED PHYSICAL EDUCATION.

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1. 研究の目的

中華民国台湾省における障害者教育は、視覚障害者や聴覚障害者の教育に重きがおかれ、ポリオや整形外科的疾患による障害者の教育は、多くの場合、普通学校において実施されていることを知った。

そこで、殊に、大学において、100人に1人はいるポリオ罹患学生の適応の問題は、どのような状況にあるのであるかに関心を抱き、多少なりとも、その改善のための示唆を得られればと考え、本研究を実施した。

2. 研究の方法

研究は、共同研究者である姫重慶が、直接面接法により、人格特性を知るために、Cattellの16項目からなる人格素因テストを中原大学の54人のポリオ罹患学生を対象に実施し、同様に、スポーツに対する態度や適応に関する調査として、11項目からなる質問紙を作成し、中原大学を含む10大学128人のポリオ罹患学生を対象に実施した。

尚、データの分析に当っては、Z-test, t-testを人格素因テストに、また、ポリオ罹患学生のスポーツに対する態度等については、 χ^2 検定を用い検討した。

3. 結果と考察

ポリオ罹患学生の人格特性は、男女共、普通学生と同様の傾向にあり、その適応に関しては特に問題点を認められなかった。

スポーツに対する態度のひとつとして、特殊体育という言葉が好きか否かを問うたところ、多くの学生が「好ましい言葉」と答えて、特殊体育の授業に参加する理由として、健康のためを挙げていたが、男子学生の多くは、健康のためと単位取得のためであり、女子学生では、健康のためが圧倒的に多かった。

好きなスポーツ種目としては、バドミントンや卓球の様な対人的スポーツを好む傾向にあったが、男女間では差異があり、男子学生は、多様なスポーツを好み、女子学生には種目の偏りが認められた。しかし、男女共、障害の程度による影響は認められなかった。

競争の場に参加することについては、積極性が認められ、参加したいと答える者が多かった。

また、多くのポリオ罹患学生は、屋外スポーツに参加することが好きであり、よく参加している傾向にあった。

これらのことから、彼等は、スポーツが好きであると考えられることもできた。

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さらに、男女の別なく、また、障害の程度に関係なく、身体活動は、彼等を幸せに導き、友人を増やすと考え、授業で用意される身体活動に満足している傾向にもあった。

そして、障害のある人々に対する身体活動は、男女別、また、障害の程度に関係なく、大切であると考えているものが多く、特殊体育の授業から、健康に関すること、精神的な事柄を多く学んだと答えていた。

ポリオ罹患学生の適応を知るために、周囲の者が、彼等の状態について気を配っているだろうかと問うたところ、多くの学生が、「気をつけてくれている」と答え、両者は、良い関係にあることを知ることができた。

最後に、特殊体育教師が特殊体育を担当することの必要性については、男女の別なく、大多数が認めていたが、障害の程度別にみると、その傾向があるとは言えなかった。

4. まとめ

ポリオ罹患学生の人格特性は、普通学生と同様の傾向にあり、男女共、障害の程度に関係なく、競争の場を好み、スポーツをすることを求め、好ましい態度で特殊体育授業に参加していると考えることができたが、障害の特性を考慮し、一人ひとりを大切にしたい授業場面を用意することの必要性も知ることができた。

1. Introduction

(1) Statement of the problems:

Special education in Taiwan, R.O.C is emphasis on blind and deaf children. There are few schools and organizations set for poliomyelitis or orthopedically handicapped child. The reasons is that, because the deficiency degree is defferent, and the intelligent growth as same as normal children. So the authority thought, the poliomyelitis children can receive education as normal.

In fact, the poliomyelitis students in high competition school circumstance, how about their adjustment in school, especially in the college?

As we know, the life of the college poliomyelitis student becomes more independent, more relationship, the thought domain is more increased, those factors case of the poliomyelitis college students a lot of problems in school adjustment.

(2) Motivation of study:

Since 19 century, the democracy education impact and influence, the idea of equality education became the goal of education in every county. Education not only could not discriminate on the basis of sex, race, color, religion, national origin, but also could not

prevent the handicapped children receive education.

As we know, the growth of education in every country, there was a general education comes first, then looked into the develop of special education. For example, education in Taiwan, R.O.C. obligation education from six years to nine years, beginning in 1968, at the same time passed a law for the handicapped for a equal education opportunity.

Recently, because the living standard is improved in Taiwan, R.O.C. more people and more charity organizations pay attention in this problems. And many special schools is established by authority like the school for the blind, the school for the deaf, the school for disabled and school for high intelligence quality child. But the authority treats crippled child or orthopedically handicapped to common school to receive education. There is no special unit to guide for cripple child or orthopedically handicapped child, especially on psychological and adjustment problems.

In Chung Yuan Christan University, Chung Li, Taiwan, R.O.C. there are six thousand day time school students. Among them, there sixty cripple or orthopedically handicapped. The percentage rate is 100:1 in school. The administration plan, teaching project, program,

equipment, guide work, environment are few considered about those handicapped students by authority.

Those factors plus individual's physiological deficiency and poor personality characteristic will cause adjustment difficult and influence in teaching.

(3) Purpose of problems:

The purpose of this study are followings.

a). To understand the personality characteristics to be referred to instructors for instruction.

b). To analyze the personality characteristic differences between the poliomyelitis student and common college freshman for generalization.

c). Investigate the poliomyelitis student's favorite sports for improve the adapted physical education program.

2 . Description of procedures

(1) Cattell Sixteen Personality Factor Questionnaire Test:

a). Subjects: 54 poliomyelitis students in Chung Yuan Christian University, Chung Li city, Taiwan, R.O.C.

b). Mode: Compare to Taiwan and Hong Kong territory male and female college student 16 P.F. test in 1966, to mutual relationship.

c). Test date: Dec.15, 1983.

d). Place: Classroom, Chung Yuan Christian University. Conducted by Prof. Paul Chorng Ching Ji.

e). 16 P.F. test divided two groups male and female to compare to mode for finding out their relationships through Z-test and t-test.

(2) Teacher-made 11 Items Multiple Choice Test:

a). Subjects: 128 poliomyelitis students from 10 different colleges and universities in Taiwan, R.O.C., as following: Chung Yuan Christian Univ., College of Marine and Oceanic Technology, Univ. of Chinese Cluture, Central

Univ., Cheng Chi Univ., Chung Hsing Univ., Tawan Univ., Tam Kang Univ., Su Jan Home Economic College and Taiwan College of Industrial & Technology.

b). Test date: Beginning in September 1983 to Dec. 1983.

c). Place: Separate test in each college and university.

d). Concerning the poliomyelitis student's adjustment in school it divided five groups (sample total group, male and female, sever and mild) find out the problem through percent and χ^2 -examined.

3 . Results

(1) Cattell Sixteen Personality Factor Questionnaire Test:

According to the data of comparison between female and male, statistic, through t-test (table 1), we found among the 16 factors, there are three factors significant ($p < 0.05$), Factor E; assertive, Factor G; conscientious and Factor I; tender-minded, and the data of comparison between severe group and mild group, there are two factors significant ($p < 0.05$), Factor O; apprehensive and Factor Q₂; self-sufficient.

(2) Teacher-made 11 Items Multiple Choise Test:

The result was the following (table 2-12), and on the sample total group, there are all items investigation are significant.

On the poliomyelitis students male group compare to female group, question 2, 3, 10, 11 are significant.

On the poliomyelitis students severe group compare to mild group, there are no significant.

4 . Discussion

(1) Delimitation of the study:

This report is studing to the poliomyelitis student. The poliomyelitis student is not easy going. In order to understand and trust, we do it very carefully, from the 16 P.E. Questionnaire test to teacher-made investigation test. We took

Table 1 16 P.F. Test Score and Standard Ten Score (Sten) of 54 Poliomyelitis Students in C.Y.C.U.
() : Number of subjects

Factor	male (45)		female (9)		t —score P < 0.05	mild (44)		severe (10)		t —score P < 0.05
	mean	Sten	mean	Sten		mean	Sten	mean	Sten	
A. Outgoing vs. Reserved	7.133	4	8.777	6	1.069	6.977	4	9	5	1.358
B. More intelligent vs. Less intelligent	8.622	7	9.333	7	1.176	8.772	7	8.6	7	- 0.294
C. Emotionally stable vs. Emotionally less stable	15.57	6	14.66	6	- 0.618	15.43	5	15.4	5	- 0.022
E. Assertive vs. Humble	9.466	5	5.444	3	- 3.00 *	8.772	4	8.9	4	0.0914
F. Happy-go-lucky vs. Sober	10.75	6	10.77	6	0.0126	10.27	5	12.9	6	1.599
G. Conscientious vs. Expedient	12.66	5	14.88	7	2.434*	12.93	5	13.1	5	0.1840
H. Venturesome vs. Shy	10.35	5	8.888	6	- 0.909	9.977	5	10.7	6	0.4641
I. Tender-minded vs. Tough-minded	10.2	6	12.88	7	2.153*	10.40	6	11.7	7	1.043
L. Suspicious vs. Trusting	9.244	4	8.777	5	- 0.439	9.022	4	9.8	5	0.7657
M. Imaginative vs. Practical	12.4	5	14.55	6	1.913	12.77	6	12.6	6	- 0.155
N. Shrewd vs. Forthright	8.066	5	8.0	5	- 0.065	7.772	5	9.3	6	1.608
O. Apprehensive vs. Placid	9.844	6	12.11	6	1.870	7.772	5	11.1	6	3.157*
Q1. Experimenting vs. Conservative	12.64	7	12.44	6	- 0.169	12.36	6	13.1	7	0.6665
Q2. Self-sufficient vs. Group-dependent	12.22	6	13.44	6	1.219	12.77	7	10.9	6	- 1.99 *
Q3. Controlled vs. Undisciplined	12.57	6	13.0	6	0.4294	12.93	6	11.4	5	- 1.66
Q4. Tense vs. Relaxed	11.88	5	11.33	5	- 0.439	11.63	5	12.5	6	0.7135

a long times, because we have to go to each school for explanation, the main purpose of this investigation is to get cooperation and reliable in test.

On the P.F. Questionnaire test, we were not only considered common problems, but also thought about psychological problems.

On the teacher-made investigation test, we

took 128 poliomyelitis students from 10 different colleges and universities in Taiwan. Those poliomyelitis students are different major.

Although the physiological deficiency or disability could not completely the obstacle of school adjustment, but most of people, including the poliomyelitis student himself thinks that the

Table 2 Teacher-made 11 Items Multipule Choise Test and Those Results

(1) Do you like the term "Special Physical Education".

a. *Good* b. *Don't mind* c. *Change it* d. *Rehabilitation* e. *Other suggestion*

Item Classification	a. Good		b. Don't mind		c. Change it		d. rehabilitation		e. Other suggestion		Blank		TOTAL		x ²
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Sample total Group	54	42.18	52	40.62	7	5.47	10	7.81	3	2.34	2	1.56	128	100	103.285 *
Male Group	38	40.43	41	43.62	5	5.32	6	6.38	3	3.19	1	1.06	94	100	3.628
Female Group	16	47.05	11	32.35	2	5.88	4	11.76	0	0	1	2.94	34	100	
Severe Group	14	56	8	32	1	4	2	8	0	0	0	0	25	100	3.311
Mild Group	40	38.83	44	42.72	6	5.83	8	7.77	3	2.91	2	1.94	103	100	

* p < 0.05 Item blank is not included

Table 3 (2) For what purpose do you go to a special physical education class.

a. *Health* b. *Relationship* c. *Technical training* d. *Requirement credit* e. *Other explain*

Item Classification	a. Health		b. Relation-ship		c. Technical training		d. Require-ment credit		e. Other explain		Blank		TOTAL		x ²
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Sample total Group	53	41.41	7	5.47	14	10.94	47	36.72	3	2.34	4	3.12	128	100	88.580 *
Male Group	36	38.30	4	4.26	13	13.83	37	39.36	3	3.19	1	1.06	94	100	11.05 *
Female Group	17	50	3	8.82	1	2.94	10	29.41	0	0	3	8.82	34	100	
Severe Group	12	48	2	8	2	8	7	28	1	4	1	4	25	100	2.018
Mild Group	41	39.81	5	4.85	12	11.65	40	38.83	2	1.94	3	2.94	103	100	

* p < 0.05 Item blank is not included

physiological deficiency is a inferior status position in the society.

So, in order to let the poliomyelitis student to understand the purpose of the test and investigation, we use the word "Physical Condition" substituted to "Poliomyelitis" or "Cripple" to express my friendship and test reliable. But some of them did not agree or accept our explanation.

On 16 P.F. Questionnaire test, we took the special physical education class 54 students, in Chung Yuan Christian University, because they are more reliable and convenience.

(2) Cattell Sixteen Personality Factor Questionnaire Test:

It divided several groups (male group and female group, sever group and mild group) compare to mode and compare each other for finding out the result of their mutual relationship.

From the result of male and female (table 1), we found, among the 16 factors, there are three factors significant (p < 0.05), Factor E; assertive, Factor G; conscientious and Factor I; tender-minded. Among the three significant factors, the score of Factor G and Factor I, the C.Y.C.U.

Table 4 (3) What kind of sports do you like best choose three.
 a. Table ball b. Badmington c. Swimming d. Gymnastic e. Dart f. Arrow shoot
 g. Pooltableball h. Basketball i. Softball j. Volley ball k. Tai chi boxing
 l. Bycycle riding m. track & field n. Other suggsetion

Item	Number & percentage		Sample total		Severe		Mild		Male		Female	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
a. Tableball	78	20.31	18	24.00	60	19.41	55	19.50	23	22.54		
b. Badmington	81	21.09	15	20.00	66	21.35	56	19.85	25	24.50		
c. Swimming	23	5.98	5	6.66	18	5.82	21	7.44	2	1.96		
d. Gyminastic	15	3.90	4	5.33	11	3.55	6	2.12	9	8.82		
e. Dart	19	4.99	7	9.33	12	3.88	10	3.54	9	8.82		
f. Arrow shoot	12	3.12	5	6.66	7	2.26	7	2.48	5	4.90		
g. Pooltableball	41	10.67	8	10.66	33	10.67	35	12.41	6	5.88		
h. Basketball	22	5.72	1	1.33	20	6.47	15	5.31	7	6.86		
i. Soft ball	3	0.78	1	1.33	2	0.64	3	1.06	0	0		
j. Volley ball	8	2.08	2	2.26	7	2.26	8	2.83	0	0		
k. Tai chi boxing	3	0.78	1	1.33	2	0.64	0	0	3	2.94		
l. Bycycle riding	79	20.57	8	10.66	71	22.97	66	23.4	13	12.74		
m. Track & Fild	0	0	0	0	0	0	0	0	0	0		
n. Other suggestion	0	0	0	0	0	0	0	0	0	0		
χ^2	446.304 *		14.109				31.711 *					

* $p < .05$ Item blank is not included

Table 5 (4) Do you like participating in any kind of sports competition.
 a. Yes b. No c. No idea d. Don't care

Item Classification	a. Yes		b. No		c. No idea		d. Don't care		Blank		TOTAL		χ^2
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Sample total Group	51	36.96	29	21.01	31	22.46	24	17.39	3	2.17	128	100	12.529 *
Male Group	39	37.50	21	20.19	22	21.15	20	19.23	2	1.92	94	100	0.452
Female Group	12	35.29	8	23.53	9	26.67	4	11.76	1	2.94	34	100	
Severe Group	10	40	3	12	8	32	3	12	1	4	25	100	2.729
Mild Group	41	39.81	26	25.24	23	22.33	11	10.68	2	1.94	103	100	

* $p < 0.05$ Item blank is not included

Table 6 (5) Do you like to attend out door sports.

a. *Always* b. *Usually* c. *Sometimes* d. *Never* e. *Other explain*

Item Classification	a. Always		b. Usually		c. Sometimes		d. Never		e. Other explain		TOTAL		x^2
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Sample total Group	16	12.5	39	30.47	71	55.47	2	1.56	0	0	128	100	85.187 *
Male Group	14	14.89	29	30.85	49	52.13	2	2.13	0	0	94	100	3.074
Female Group	2	5.88	10	29.41	22	64.71	0	0	0	0	34	100	
Severe Group	2	8	8	32	15	60	0	0	0	0	25	100	1.127
Mild Group	14	13.59	31	30.10	56	54.37	2	1.97	0	0	103	100	

* $p < 0.05$ Item blank is not included

Table 7 (6) Concerning the classmates: in out sports or activity, do they think about your condition.

a. *Always* b. *Usually* c. *Sometimes* d. *Never*

Item Classification	a. Always		b. Usually		c. Sometimes		d. Never		TOTAL		x^2
	Number	%	Number	%	Number	%	Number	%	Number	%	
Sample total Group	15	11.32	24	18.75	70	54.69	19	14.84	128	100	61.437 *
Male Group	11	11.70	17	18.09	56	57.45	12	12.77	94	100	1.605
Female Group	4	11.76	7	20.59	16	47.06	7	20.59	34	100	
Severe Group	3	12	5	20	14	56	3	12	25	100	0.207
Mild Group	12	11.65	19	18.47	56	54.36	16	15.52	103	100	

* $p < 0.05$

Table 8 (7) Do you think the physical activity for handicapped person is
 a. *Important* b. *No important* c. *No idea* d. *Other explain*

Item Classification	a. Important		b. No Important		c. No idea		d. Other explain		Blank		TOTAL		x^2
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Sample total Group	100	78.13	4	3.13	15	11.72	6	4.69	3	2.34	128	100	203.864 *
Male Group	71	75.53	3	3.19	14	14.89	4	4.24	2	2.13	94	100	3.564
Female Group	29	85.29	1	2.94	1	2.94	2	5.88	1	2.94	34	100	
Severe Group	21	84	0	0	2	8	2	8	0	0	25	100	2.930
Mild Group	79	76.71	4	3.88	13	12.62	4	3.88	3	2.91	103	100	

* $p < 0.05$ Item blank is not included.

Table 9 (8) What you learned from the special physical class.
 a. *Health* b. *Philosophy* c. *Psychological* d. *Sports technical* e. *Other explain*

Item Classification	a. Health		b. Philosophy		c. Psychological		d. Sports technical		e. Other explain		TOTAL		x^2
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Sample total Group	49	38.28	6	4.69	48	37.50	18	14.06	7	5.47	128	100	88.297 *
Male Group	40	42.55	5	5.32	31	32.98	14	14.89	4	4.26	94	100	5.043
Female Group	9	26.47	1	2.94	17	50	4	11.76	3	8.82	34	100	
Severe Group	12	48	1	4	8	32	3	12	1	4	25	100	1.265
Mild Group	37	35.94	5	4.85	40	38.13	15	14.55	6	5.83	103	100	

* $p < 0.05$

Table 10 (9) Do you think physical activity will help you to
 a. *Make friend* b. *Happy* c. *Unhappy* d. *Become afraid* e. *Other explain*

Item Classification	a. Make friend		b. Happy		c. Unhappy		d. Become afraid		e. Other explain		Blank		TOTAL		x^2
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Sample total Group	32	23.19	66	47.83	9	6.52	1	0.78	22	15.94	8	5.8	128	100	98.692 *
Male Group	26	27.66	51	54.26	7	7.45	1	1.06	15	15.96	4	4.24	94	100	4.464
Female Group	6	17.64	15	44.12	2	5.88	0	0	7	20.59	4	11.76	34	100	
Severe Group	10	40	7	28	1	4	0	0	5	20	2	8	25	100	8.884
Mild Group	22	21.36	57	55.42	8	7.77	1	0.97	17	10.51	8	7.77	103	100	

* $p < 0.05$ Item blank is not included

Table 11 (10) Do you think a special physical educator needs to take the special education course except his major in theaching. a. *Necessary* b. *Unnecessary* c. *No idea* d. *Other explain*

Item Classification	a. Necessary		b. Unnecessary		c. No idea		d. Others explain		Blank		TOTAL		x ²
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Sample total Group	92	71.88	8	6.25	24	18.75	2	1.56	2	1.56	128	100	163.142 *
Male Group	61	64.89	7	8.51	22	23.40	2	2.13	1	1.06	94	100	12.80 *
Female Group	31	91.88	0	0	2	5.88	0	0	1	2.94	34	100	
Severe Group	20	80	1	4	4	16	0	0	0	0	25	100	1.633
Mild Group	72	69.91	7	6.80	20	19.41	2	1.94	2	1.94	103	100	

* p < 0.05 Item blank is not included

Table 12 (11) Did you satisfy the physical activity programs which the instructor arranged for you. a. *Satisfied* b. *Unsatisfied* c. *No idea* d. *Other suggestion*

Item Classification	a. Satisfied		b. Unsatisfied		c. No idea		d. Other Suggestion		Blank		TOTAL		x ²
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Sample total Group	37	28.91	28	21.88	52	40.63	6	4.69	5	3.91	128	100	36.127 *
Male Group	29	30.85	17	18.09	42	44.68	4	4.24	2	2.13	94	100	7.226
Female Group	8	23.53	11	32.35	10	29.41	2	5.88	3	8.82	34	100	
Severe Group	5	20	7	28	9	36	3	12	1	4	25	100	5.093
Mild Group	32	31.07	21	20.39	43	41.75	3	2.91	4	3.88	103	100	

* p < 0.05 Item blank is notincluded.

poliomyelitis female students are higher than the C.Y.C.U. poliomyelitis male students. That means the C.Y.C.U. poliomyelitis female students are more conscientious, persevering, staid, rule-bound, tender-minded, dependent, over-protected, and sensitive. The score of Factor E, the C.Y.C.U. poliomyelitis female students is lower than the C.Y.C.U. poliomyelitis male students. That means the C.Y.C.U. poliomyelitis female students are more humble, mild, accommodating, and conforming. Other 13 factors are no significant, even the

score is different.

And from the result of mild and severe, we found, among the 16 factors, there are two factors significant (p < 0.05), Factor O; apprehensive and Factor Q₂; self-sufficient. Two significant factors, the score of Factor O, the severe group is higher than mild group. That means the C.Y.C.U. poliomyelitis severe students are more apprehensive, worrying, depressive, and trouble, the score of Factor Q₂, the C.Y.C.U. poliomyelitis severe group is lower than mild group. That means the C.Y.C.U.

Table 13. C.Y.C.U. Poliomyelitis Male Students Compare to Taiwan & Hong-Kong College Male Students mode of 16 P.F.

Factor	Classification	Number	Mean	Sten	S.D.	Z-score
A. Out-going	Mode male group	482	9.17	5	3.61	- 3.78 *
	Polio. male group	45	7.133	4		
B. Intelligent	Mode male group	482	7.56	6	1.61	4.428 *
	Polio. male group	45	8.62	7		
C. Emotionally	Mode male group	482	15.61	6	3.85	- 0.56
	Polio. male group	45	15.57	6		
E. Assertive	Mode male group	482	11.36	5	3.644	- 0.348
	Polio. male group	45	9.466	5		
F. Happy-go-lucky	Mode male group	482	11.23	6	3.69	- 0.862
	Polio. male group	45	10.75	6		
G. Conscientious	Mode male group	482	13.05	5	2.76	- 0.931
	Polio. male group	45	12.66	5		
H. Venturesome	Mode male group	482	10.32	5	4.95	0.0481
	Polio. male group	45	10.35	5		
I. Tender-Minded	Mode male group	482	9.67	6	2.78	1.278
	Polio. male group	45	10.2	6		
L. Suspicious	Mode male group	482	10.29	5	2.99	- 2.34 *
	Polio. male group	45	9.244	4		
M. Imaginative	Mode male group	482	12.62	6	3.43	- 0.43
	Polio. male group	45	12.4	5		
N. Shrewd	Mode male group	482	8.22	5	2.55	- 0.403
	Polio. male group	45	8.066	5		
O. Apprehensive	Mode male group	482	9.99	6	3.67	- 0.266
	Polio. male group	45	9.844	6		
Q1. Experimenting	Mode male group	482	10.97	6	2.63	4.270 *
	Polio. male group	45	12.64	7		
Q2. Self-Sufficient	Mode male group	482	10.04	5	3.19	4.588 *
	Polio. male group	45	12.22	6		
Q3. Controlled	Mode male group	482	13.01	6	3.31	- 0.875
	Polio. male group	45	12.57	6		
Q4. Tense	Mode male group	482	12.19	5	4.34	- 0.465
	Polio. male group	45	11.88	5		

* $p < 0.05$

poliomyelitis severe students are more group-dependent, a joiner and sound follower. Other 14 factors are no significant, that means no different between severe group and mild group

in personality characteristic factors.

According to the data, statistics, through Z-test (table 13), we found among the 16 factors, there are five factors significant ($p < 0.05$),

Factor A; outgoing, Factor B; intelligent, Factor L; suspicious, Factor Q₁; experimenting, and Factor Q₂; self-sufficient. Among the five significant factors, the score of Factor B, Factor Q₁ and Factor Q₂, C.Y.C.U. poliomyelitis male students are higher than the mode male students. That means, the C.Y.C.U. poliomyelitis male students are more intelligent, adstract-thinking, bright, experimenting, critical, liberal, analytical, free-thinking, self-sufficient, prefers on decision, and resourceful. The score of Factor A and Factor L, the C.Y.C.U. poliomyelitis male students are lower than the mode male students. That means the C.Y.C.U. poliomyelitis students are more reserved, detached, critical, cool, trusting, adaptable, free of jealousy, and easy to get on with. Other 11 factors are no significant. That means, the C.Y.C.U. poliomyelitis male students, the persoanlity characteristic as same as common college students.

And according to the data, statistic, through Z-test (table 14), we found, among 16 factors, there are four factors significant (p < 0.05), Factor B; intelligent, Factor E; assertive, Factor G; conscientious, and Factor Q₁; experimenting. Among the four significant factors, the score of Factor B, Factor G and Factor Q₁, the C.Y.C.U. poliomyelitis female students are higher than the mode female students. That means, the C.Y.C.U. poliomyelitis female students are more intelligent, abstract-thinking, bright, conscientious, persevering, staid, rule-bound, experimenting, critical, liberal, analytical, and free-thinking. The score of Factor E, the C.Y.C.U. poliomyelitis female students is lower than the mode female students. That means, the C.Y.C.U. poliomyelitis female students are more humble, mild, accommodating, and conforming. Other 12 factors are no significant, that means the C.Y.C.U. poliomyelitis female students, the personality characteristic as same as common college students.

So, based on the result of the analysis, there

is no problem that poliomyelitis student's personality characteristic adjustment in school in C.Y.C.U.

(3) Teacher-made 11 Items Multipule Choise Test:

a. The term "Special Physical Education"

Most of poliomyelitis students think the term "Special Physical Education" is good. ($\chi^2 = 103.285 > \chi^2_{0.954} = 9.488$, p < 0.05)

And they go to special education class, the purpose for health. ($\chi^2 = 88.580 > \chi^2_{0.954} = 9.488$, p < 0.05)

But the means of male group and female group on the purpose for special physical education class are quite different. Male group, 39% for requirement credit, 38% for health. Female group, 29% for requirement credit, 50% for health. ($\chi^2 = 11.05 > \chi^2_{0.954} = 9.488$, p < 0.05)

b. The attitude for sports

Majority of poliomyelitis student like participating in any kind of sports competition ($\chi^2 = 12.529 > \chi^2_{0.9513} = 7.815$, p < 0.05), and out door sports. ($\chi^2 = 85.187 > \chi^2_{0.9513} = 7.815$, p < 0.05)

Most of poliomyelitis students like play badminton, table ball and bicycle riding sports. ($\chi^2 = 446.304 > \chi^2_{0.9513} = 22.362$, p < 0.05)

Concerning the classmates, 55% of them think about their condition sometimes in out sports or activity, 18% are usually. This means they have a good relationship with the classmates.

c. The attitude for the special physical education class

Poliomyelitis students got "Health" (38%) and "Psychological" (38%) from the special physical education class.

They think the physical activity for the handicapped person is "Important". ($\chi^2 = 203.864 > \chi^2_{0.953} = 7.815$, p < 0.05)

And 48% of them think physical activity will help them happy, 23% of them think physical activity will make friends. ($\chi^2 = 98.692 > \chi^2_{0.954} = 9.488$, p < 0.05)

Table 14. C.Y.C.U. Poliomyelitis Female Students Compare to Taiwan & Hong Kong College Female Students mode of 16 P.F.

Factor	Classification	Number	Mean	Sten	S.D.	Z-score
A. Out-going	Mode female group	522	9.06	6	3.4	- 0.249
	Polio. female group	9	2.777	6		
B. Intelligent	Mode female group	522	7.65	6	1.60	3.156 *
	Polio. female group	9	9.333	7		
C. Emotionally	Mode female group	522	14.08	6	4.11	0.428
	Polio. female group	9	14.66	6		
E. Assertive	Mode female group	522	9.82	6	3.50	- 3.75 *
	Polio. female group	9	5.444	3		
F. Happy-go-lucky	Mode female group	522	10.16	6	3.84	0.4826
	Polio. female group	9	10.77	6		
G. Conscientious	Mode female group	522	12.69	6	2.85	2.314 *
	Polio. female group	9	14.88	7		
H. Venturesome	Mode female group	522	8.76	6	4.95	0.0781
	Polio. female group	9	8.888	6		
I. Tender-minded	Mode female group	522	11.42	5	2.87	1.535
	Polio. female group	9	12.88	6		
L. Suspicious	Mode female group	522	10.25	5	3.05	- 1.44
	Polio. female group	9	8.777	5		
M. Imaginative	Mode female group	522	13.27	5	3.39	1.137
	Polio. female group	9	14.55	6		
N. Shrewd	Mode female group	522	8.21	5	2.67	- 0.235
	Polio. female group	9	8.0	5		
O. Apprehensive	Mode female group	522	10.42	5	3.79	1.338
	Polio. female group	9	12.11	6		
Q1. Experimenting	Mode female group	522	10.15	5	2.54	2.709 *
	Polio. female group	9	12.44	6		
Q2. Self-Sufficient	Mode female group	522	12.26	5	2.88	1.233
	Polio. female group	9	13.44	6		
Q3. Controlled	Mode female group	522	12.21	5	3.41	0.6950
	Polio. female group	9	13.0	6		
Q4. Tense	Mode female group	522	11.46	6	4.79	- 0.079
	Polio. female group	9	11.33	5		

* P < 0.05

However, 29% of them "Satisfied" the physical activity program which the instructor arranged for, 22% of them "Unsatisfied", and 41% of them "No idea".

Then, 72% of them think a special physical educator needs to take the special education course except his major in teaching. ($\chi^2 = 163.142 > \chi^2_{0.953} = 7.815$, $p < 0.05$)

(4) College adjustment:

There is no doubt that college is a stressful experience for many students. A psychiatrist who is chief of the student health service at a large university has estimated that one out of every nine students becomes sufficiently disturbed during college to need major professional help, hospitalization or leave. According to his estimated 8 to 12 percent of college students are "severely troubled". Some problems seem common to many college students and campuses. Difficulties in studying, finding interest and purpose in college work, and in hitting upon a suitable vocational goal are frequent complaints of students, such as lone lines, unsureness of one self, difficulty in forming relationship with members of the opposite sex. And conflicts with parents are widely found in young adults whether in college or not.

Colleges vary widely in the environments they provide and in the characteristic of their students. How easily a student adjusts to college depends in part on the needs of the student and the extent to which the college facilitates satisfaction of these needs and also on the demands of the college and extent to which the student can meet these demands. Students who or fail at one college many survive or prosper at another.

One student, for example, may enjoy the impersonality of a large campus, he quickly adjusts to the new environment and enjoy the autonomy it grants him. Another student, however, feels lost in the same environment, perhaps his instructors seem distant, bent on other concern, and lacking an interest in the students, as a consequence, he may feel powerfully moved to abandon his college career.

What exactly is meant by adjusting to college? There are a number of different ways of defining college adjustment. The simplest definition would be in terms of academic achievement. A more complex definition

involves the ideas of personal growth and even more complex approach would combine both academic achievement and personal growth.

5. Summary

From this study, 16 P.E. test for 54 poliomyelitis students and Multiple Choice test for 128 poliomyelitis students of college and university in Taiwan, R.O.C., we found the followings:

- 1). The poliomyelitis student's personality characteristics are the same as common college students, and there is no problem that their personality characteristic adjustment in school in C.Y.C.U.
- 2). Most of poliomyelitis students think the term "Special Physical Education" is good.
- 3). On the course of adapted physical education, most of poliomyelitis students understand physical activity will help them for good physical condition.
- 4). Most of poliomyelitis students like participating in any kind of sports competition and out door sports.
- 5). It is great important to consider the characteristic of student's ability for arranging the physical activity program.

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