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Physical health condition of males students with blind in specially high schools Nguyen Dinh Chieu Ho Chi Minh city

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Abstract
The study identified 09 criteria of physical health evaluation to ensure reliability and notification; thereby providing information on physical health condition of males students with visual blind special high schools Nguyen Dinh Chieu Ho Chi Minh City, Vietnam through the synthesis and comparison of average values the criteria of physical health of the research object with the physical health average of Vietnamese people, and the average of students high schools in Ho Chi Minh City.

Keywords: Condition, physical health, males students, blind, special high school Nguyen Dinh Chieu

1. Introduction
In physical education for children with disabilities faces many difficulties; Especially, the current physical education (PE) program for students and students with disabilities has not been agreed to apply to teach nationwide. For high school, most schools are only interested in training them for a career to graduate but overlook the physical health development of this subject. The issue of properly assessing the situation to have a scientific basis for selecting physical health enhancement solutions for students with disabilities is an urgent requirement, and also an important and regular task of the whole society. The first is education sector of Vietnam. In particular, improving the quality and effectiveness of physical education for students with disabilities is contributing to helping them integrate into life and society. Therefore, having accurate information about the physical health condition of this subject is extremely necessary, this is an important basis for the orientation of blind students in physical training. With the above importance, we chose to study: "Physical health condition of males students with blind in specially high schools Nguyen Dinh Chieu Ho Chi Minh City".

2. Research and Methods
Analyzing and synthesizing materials, interviews, pedagogical tests, medical tests and statistical math. Study object: 30 males blind students (07 students born in 1999, 03 students born in 2000, 03 students born in 2002, 09 students born in 2003, 03 students born in 2004 and 05 students born in 2005), Nguyen Dinh Chieu special high school, Ho Chi Minh City, Vietnam.

3. Results
3.1. Determining the criteria of physical health evaluation for males Nguyen Dinh Chieu special high school.
Proceed in 03 steps:
Step 1: Summarize documents on the Vietnamese physical survey of Duong Nghiep Chi [3], regulations on fitness assessment for students of the Ministry of Education and Training, Vietnam [1], Nguyen Van Tri (2012) [7], Nguyen Quoc Thang (2011) [6], Nguyen Quoc Thang (2017) [8], Luu Thieu Son (2016) [6], Standards of physical training for high school students of the Department Education Ho Chi Minh City [3], According to exercise books 6, 7, 8, 9 [2]. Through the study of the special learning environment and based on the physical health characteristics of the study object, in consultation with the managerial staff, education experts we selected 16 suitable criteria.

Step 2: Conducting the drafting and interviewing. The interview results selected the criteria of physical assessment for the study subjects including the following 09 criteria: Height (cm), Running 10m (seconds), Long jump (cm), Right hand's force (kg), Bending the body (cm), Applause 10 seconds (times), Throwing the ball hit the target (points), Heart function (HW), Living capacity (ml).

Step 3: Check the reliability

In this study, criteria to be determined for functional evaluation are cardiac function (HW), Living capacity (ml) and form: height (cm). The criteria have been widely used for all audiences, these criteria are milliml changed and are measured by modern and accurate means, so there is no need to re-test the reliability.

The reality shows that the number of objects at each age are very dispersed as follows: 30 students (07 students born in 1999, 03 students born in 2000, 03 students born in 2002, 09 students born in 2003, 03 students born in 2004 and 05 students born in 2005). The above figure shows that the number of objects is very dispersed at age, sex and year of birth, therefore, the number of people at each age are very small. Due to the very special physical health characteristics of the research object so that it can have a basis for importing the objects with similar qualifications according to each research group, the article compares the average value of the criteria for physical health assessment. The results of ANOVA study among groups of same sex among the same gender were obtained in Table 1 as follows:

Table 1: The result of comparing the average value of achievement of the criteria of physical health evaluation of males students high school in Nguyen Dinh Chieu special school by age

No	TEST	F	Sig	Post - hoc (Scheffe)
1	Height (cm)	2.744	.043	$\mu1 \approx \mu2 \approx \mu3 \approx \mu4$, $\mu3 \approx \mu4 \approx \mu5 \approx \mu6$, $\mu1 > \mu5$, $\mu1 > \mu6$, $\mu2 > \mu5$, $\mu2 > \mu6$,
2	Running 10m (seconds)	.034	.999	$\mu1 \approx \mu2 \approx \mu3 \approx \mu4 \approx \mu5 \approx \mu6$
3	Long jump (cm)	.143	.940	$\mu1 \approx \mu2 \approx \mu3 \approx \mu4 \approx \mu5 \approx \mu6$
4	Right hand's force (kg)	.146	.979	$\mu1 \approx \mu2 \approx \mu3 \approx \mu4 \approx \mu5 \approx \mu6$
5	Bending the body (cm)	.009	1.000	$\mu1 \approx \mu2 \approx \mu3 \approx \mu4 \approx \mu5 \approx \mu6$
6	Applause 10 seconds (times)	.018	1.000	$\mu1 \approx \mu2 \approx \mu3 \approx \mu4 \approx \mu5 \approx \mu6$
7	Throwing the ball hit the target (points)	.671	.649	$\mu1 \approx \mu2 \approx \mu3 \approx \mu4 \approx \mu5 \approx \mu6$
8	Heart function (HW)	.299	.999	$\mu1 \approx \mu2 \approx \mu3 \approx \mu4 \approx \mu5 \approx \mu6$
9	Living capacity (ml)	.644	.669	$\mu1 \approx \mu2 \approx \mu3 \approx \mu4 \approx \mu5 \approx \mu6$

µ1:1999; µ2:2000; µ3:2002; µ4:2003; µ5:2004;µ6:2005

The results of Table 1 show that the average value of achievement of 08/09 criteria to evaluate physical health for the study subjects did not differ in age (Sig> 0.05). In other words, the achievement of 08/09 criteria for physical health assessment of males students in Nguyen Dinh Chieu Special High School has no difference between ages.

Particularly, the criteria of height differed in age (Sig = 0.043 <0.05), Post - hoc analysis showed that students born in 1999, 2000, 2002 and 2003 had no difference in price. average value for height because (Sig> 0.05); similarly, students with birth years of 2002, 2003, 2004 and 2005 did not have any difference in the average height value because (Sig> 0.05); However, the students with the birth years 1999 and 2000 differ from those born in 2004 and 2005 because (Sig <0.05).

The above analysis shows that the difference in achievement between the criteria of physical assessment for the study object is very small, so the thesis unifies 30 males students at Nguyen Dinh Chieu Special High School into a group to research.

In order to determine the reliability of the research object, the subject conducted a test on 30 males students at Nguyen Dinh Chieu Special School. Test 2 times, the time between two periods is 5 days apart, the conditions for checking between two times are the same. Then proceed to calculate the correlation coefficient (r) of the criteria between the two checks and obtain the results in Table 2.

Table 2: The reliability coefficient of the criteria of physical health evaluation of the males students of the Nguyen Dinh Chieu special school

No	Test	1 st (n = 30)		2 st (n = 30)		Reliability coefficients	
		M	SD	M	SD	r	P
1	Bending the body (cm)	3.23	4.17	3.33	4.10	0.99	<0.01
2	Long jump (cm)	135.40	15.85	135.60	15.46	0.97	<0.01
3	Right hand's force (kg)	27.80	4.23	27.55	4.22	0.96	<0.01
4	Running 10m (seconds)	3.11	0.32	3.12	0.30	0.96	<0.01
5	Applause 10 seconds (times)	13.53	1.76	13.50	1.81	0.96	<0.01
6	Throwing the ball hit the target (points)	10.27	1.66	10.27	1.48	0.88	<0.01

The data in Table 2 shows that all criteria of physical health evaluation have confidence coefficients r> 0.8 and *P*<0.01. Therefore, the above criteria are sufficiently reliable to assess the physical health condition of the study object.

Through three steps of document compilation, interview, reliability test, 09 physical evaluation criteria have been identified for males students at Nguyen Dinh Chieu Special High School, Ho Chi Minh City Vietnam as follows: Height (cm); Running 10m (seconds); Long jump (cm); Right hand's force (kg); Bending the body (cm); Applause 10 seconds (times); Throwing the ball hit the target (points); Heart function (HW); Living capacity (ml).

3.2. Physical health assessment of blind pupils in Nguyen Dinh Chieu special high school.

The assessment of the actual state of a phenomenal object must be based on the comparison a phenomenal object a standard or a similar object. In order to have an overview and specificity about the physical health condition of the research object, in this study we compare with the physical health

situation of Vietnamese [3, pp. 6-14], with city students Ho Chi Minh city [4, p. 52 - 56] of the same gender in the age group of lower secondary school students (11 - 14 years old). In the comparison apply the t-student test.

The results of statistical analysis and comparison of the average value of the criteria for physical health evaluation of the males with visual blind in Nguyen Dinh Chieu (see table 3) special high school with the physical health average of 11-14 year old Vietnamese are as follows:

About form

Height (cm) of the males with visual blind in Nguyen Dinh Chieu special school is higher than the physical health average of Vietnam, males 11 years old, 12 years old, 13 years old and 14 years old are 23.33cm, 17.66cm, 11.16cm, 5.26cm this difference is statistically significant at probability threshold $P<0.01$.

About function

Heart function (HW) of the males with visual blind in special school is lower than the average of physical health condition of Vietnam, males 11 years old, 12 years old, 13 years old, 14 years old are 0.94, 0.71, 1.23, respectively. 1.31 this difference is statistically significant at probability threshold $P<0.01$.

About physical fitness

Bending the body (cm) of the males with visual blind in the special school market Nguyen Dinh Chieu is inferior to the physical health average of the Vietnamese, males 11 years old, 12 years old, 13 years old, 14 years old are respectively 2.77cm, 2.77cm, 3.77cm, 4.77cm this difference is statistically significant at probability threshold $P<0.01$.

Long jump (cm), the median of males blind in special school, Nguyen Dinh Chieu is inferior to the physical health average of Vietnam, males 11 years old, 12 years old, 13 years old, 14 years old are 25.6cm, 36.6cm, 47.6cm, 57.6cm this difference is statistically significant at probability threshold $P<0.01$.

Right hand's force (kg) of men with visual blind in special market Nguyen Dinh Chieu is better than the average of physical health condition of Vietnam, males 11 years old, 12 years old is 8.5 KG, 5.5 KG and inferior to the physical health average of Vietnam14 years 3.72 KG This difference is statistically significant at probability threshold $P<0.01$. Particularly, the average squeeze force (KG) of the males with visual blind in special school Nguyen Dinh Chieu has a difference with the physical health average of Vietnam, a 13-year-old males is 0.93 KG, this difference is very small, it can be considered Equivalent at probability threshold P> 0.05.

The result of comparing the criteria of physical health evaluation between the males with visual blind in special school, Nguyen Dinh Chieu and the average males physically of Vietnam from 11 to 14 years old in figure 1.

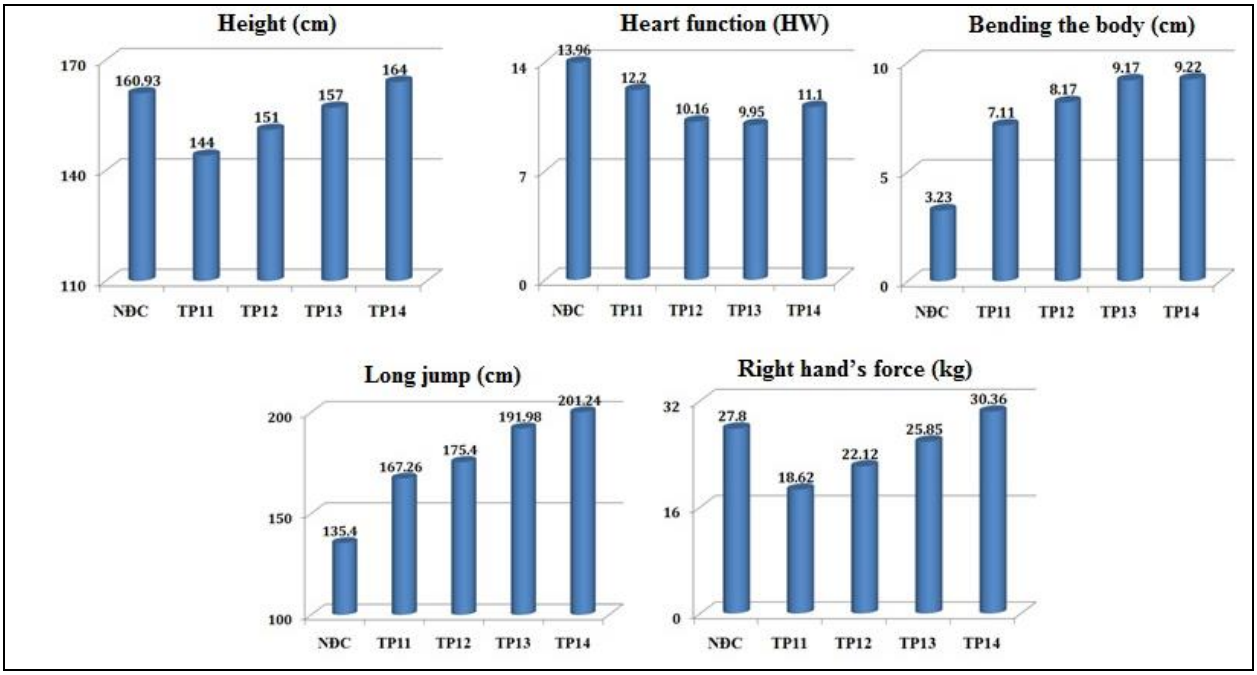


Fig 1: Comparing the criteria of physical health assessment between males blind in specially high school Nguyen Dinh Chieu (NĐC) and males physical health average of Vietnamese aged 11-14 (VN11-VN14) years.

The results showed that Nguyen Dinh Chieu special school blind males was better than the average physical health males of 11 - 14 year old Vietnamese in the criteria of height (cm) and right hand's force (kg) (11, 12 years old); equivalent in the right hand's force (kg) (13 years) and inferior to the heart function (HW), bending the body (cm), Long jump (cm) and right hand's force (kg) (14 years old). The blind males in Nguyen Dinh Chieu special school better than average physical males 11 - 14 year old Vietnamese in morphology and hand strength (11, 12 years old); equivalent to arm strength (age 13) and inferior to cardiac function, ductility, leg strength and arm strength (age 14).

The results of statistical analysis and comparison of the average value of the criteria for physical health evaluation of the males with visual blind in Nguyen Dinh Chieu (see table 4) special high school with the physical health males average of 11-14 year old Ho Chi Minh City are as follows:

Table 3: Comparing the criteria of physical health assessment between males blind in specially high school Nguyen Dinh Chieu and males physical health average of Vietnamese aged 11-14

No	TEST	M_{NDC}	SD	M_1	M_2	M_3	M_4	t_1	t_2	t_3	t_4	P_1	P_2	P_3	P_4
1	Height (cm)	160.93	6.15	137.6	143.27	149.77	155.67	20.78	15.73	9.94	4.68	<0.01	<0.01	<0.01	<0.01
2	Heart function (HW)	13.96	1.55	13.02	13.25	12.73	12.65	6.22	13.43	14.17	10.11	<0.01	<0.01	<0.01	<0.01
3	Living capacity (liter)	2.53	0.40	-	-	-	-	-	-	-	-	-	-	-	-
4	Bending the body (cm)	3.23	2.10	6	6	7	8	7.22	7.22	9.83	12.44	<0.01	<0.01	<0.01	<0.01
5	Long jump (cm)	135.40	15.58	161	172	183	193	9.00	12.87	16.73	20.25	<0.01	<0.01	<0.01	<0.01
6	Right hand's force (kg)	27.80	4.15	19.3	22.3	26.87	31.52	11.22	7.26	1.23	4.91	<0.01	<0.01	>0.05	<0.01
7	Running 10m (seconds)	3.11	0.31	-	-	-	-	-	-	-	-	-	-	-	-
8	Applause 10 seconds (times)	13.53	1.73	-	-	-	-	-	-	-	-	-	-	-	-
9	Throwing the ball hit the target (points)	10.27	1.63	-	-	-	-	-	-	-	-	-	-	-	-

Df = n -1 = 29, t05 = 2,045, t01 = 2,756

Note: ($M_{1,2,3,4}$): The average of the criteria for physical health assessment of males Vietnamese 11, 12, 13 and 14 years old.

Table 4: Comparing the criteria of physical health assessment between males blind in specially high school Nguyen Dinh Chieu and males physical health average of Ho Chi Minh City aged 11-14

No	TEST	M_{NDC}	SD	M_{1HCM}	M_{2HCM}	M_{3HCM}	M_{4HCM}	t_1	t_2	t_3	t_4	P_1	P_2	P_3	P_4
1	Height (cm)	160.93	6.15	144	151	157	164	15.08	8.84	3.50	2.73	<0.01	<0.01	<0.01	<0.01
2	Heart function (HW)	13.96	1.55	12.2	10.16	9.95	11.1	5.75	6.31	5.04	4.84	<0.01	<0.01	<0.01	<0.01
3	Living capacity (liter)	2.53	0.40	-	-	-	-	-	-	-	-	-	-	-	-
4	Bending the body (cm)	3.23	2.10	7.11	8.17	9.17	9.22	10.12	12.88	15.49	15.62	<0.01	<0.01	<0.01	<0.01
5	Long jump (cm)	135.40	15.58	167.26	175.4	191.98	201.24	11.20	14.06	19.89	23.15	<0.01	<0.01	<0.01	<0.01
6	Right hand's force (kg)	27.80	4.15	18.62	22.12	25.85	30.36	16.08	7.50	2.57	3.38	<0.01	<0.01	<0.01	<0.01
7	Running 10m (seconds)	3.11	0.31	-	-	-	-	-	-	-	-	-	-	-	-
8	Applause 10 seconds (times)	13.53	1.73	-	-	-	-	-	-	-	-	-	-	-	-
9	Throwing the ball hit the target (points)	10.27	1.63	-	-	-	-	-	-	-	-	-	-	-	-

Df = n -1 = 29, t05 = 2,045, t01 = 2,756

Note: ($M_{1,2,3,4\ HCM}$): The average of the criteria for physical health assessment of males Ho Chi Minh City 11, 12, 13 and 14 years old

About form: Height (cm) of males school blind of Nguyen Dinh Chieu special school is higher than that of males high school students in Ho Chi Minh City, 11 years old, 12 years old and 13 years old, respectively 16.93cm, 9.93cm, 11.16cm, 3.93cm and lower than males high school student Ho Chi Minh City, 14 years old 3.07cm this difference is statistically significant at probability threshold $P<0.01$.

About function: The average heart function (HW) of the blind males in Nguyen Dinh Chieu special school is higher than that of males high school students in Ho Chi Minh City, 11 years old, 12 years old, 13 years old and 14 years old, respectively 1.76, 3.8, 4.01, 2.86 this difference is statistically significant at probability threshold $P<0.01$.

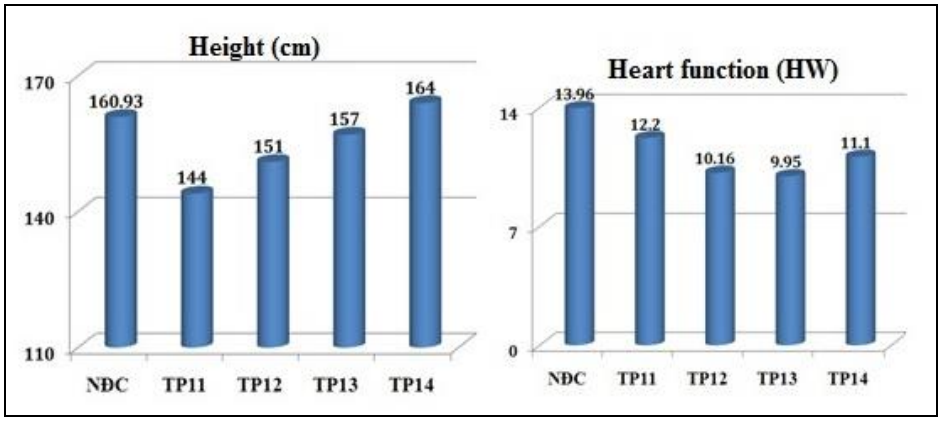
About physical fitness

Bending the body (cm) of males school blind boy in middle school of Nguyen Dinh Chieu special school is lower than that of males high school student in Ho Chi Minh City, 11 years old, 12 years old, 13 years old and 14 years old is 3.88cm, 4.94 cm, 5.94cm, 5.99cm this difference is statistically significant at probability threshold $P<0.01$.

Long jump (cm) of the blind school of Nguyen Dinh Chieu special school is inferior to males students in Ho Chi Minh City, 11 years old, 12 years old, 13 years old, 14 years old and 31.86cm respectively. 40.00cm, 56.58cm, 65.84cm this difference is statistically significant at probability threshold P <0.01.

Right hand's force (kg) of the males blind school in Nguyen Dinh Chieu special school is higher than the males high school student in Ho Chi Minh City, 11 years old, 12 years old, 13 years old is 9.18 kg, 5.68 kg, 1.95 kg and inferior to males students TP. HCM 14 years old 2.56 KG This difference is statistically significant at the probability threshold P <0.01.

The result of comparing the criteria of physical evaluation between blind males in special school Nguyen Dinh Chieu and males high school student in Ho Chi Minh City, aged 11-14 years, as shown in figure 2.



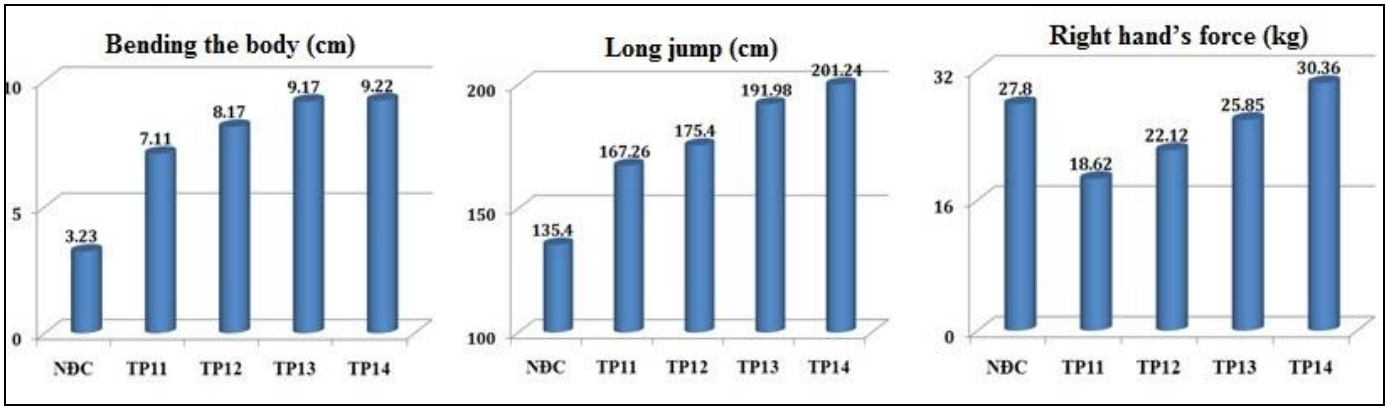


Fig 2: Comparing the criteria of physical health assessment between males blind in specially high school Nguyen Dinh Chieu (NĐC) and physical health males average high school student in Ho Chi Minh City aged 11-14 (TP11-TP14) years.

4. Discussion and Conclusions

The results of the study have identified 09 criteria that are sufficiently reliable to assess the physical condition of the blind males in Nguyen Dinh Chieu special school, Ho Chi Minh City, including: Height (cm), Running 10m (seconds), Long jump (cm), Right hand's force (kg), Bending the body (cm), Applause 10 seconds (times), Throwing the ball hit the target (points), Heart function (HW), Living capacity (ml).

The study results indicate that the physical health of the blind males in special school Nguyen Dinh Chieu is better than the average males physical health of Vietnamese 11 - 14 years old in form and hand strength (11, 12 years old); equivalent to arm strength (age 13) and inferior to cardiac function, ductility, leg strength and arm strength (age 14).

The physical health of the blind males in Nguyen Dinh Chieu special school is better than males students of Ho Chi Minh City 11 - 14 years old in terms of form and hand strength (11, 12, 13 years old); inferior to heart function, ductility, leg strength and arm strength (age 14).

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