

Swimmers Performance Level in the International Championships as a Criteria for Equalizing Competitions in Special Olympics Swimming Events.

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Special Olympics *SO* is a world wide program of sports training and athletic competitions open to individuals with mental handicap regardless of their abilities (Special Olympics International, 1996).

Results of many studies revealed that the participation of athletes in *SO* activities contributes positively to their physical, social and psychological aspects (Megginson, Nakamura & Furst, 1997; Dykens, Cohen, 1996; Riggen, Ulrich, 1993; Bell, Kozar & Martin, 1990; Edmiston, 1990; Wright & Cowden, 1986).

There is a fundamental difference which sets *SO* competition apart from those of other sports organizations. In *SO*, athletes of all ability levels are encouraged to participate, and competitions are structured so that athletes compete with other athletes in equitable divisions based on gender, age and similar ability. *SO* has suggested that all divisions be created where the variance between the highest and lowest scores within each division will not differ by more than 10% (Special Olympics International, 1996).

In events which are measured in time, like swimming, swimmers are ranked in descending order based upon submitted entry or preliminary scores.

The competitions in *SO* are designed to give a great number of athletes the chance to compete and provide fair and equitable conditions for them. It is supposed that no competitor shall obtain unfair advantage over another, and the experience of winning is available for many participants. In spite of that, some athletes don't follow the honest effort rule while participating in *SO* competitions.

In swimming competitions - as an example - some swimmers decrease their speed in the preliminary event in order to be classified in a lower level of

divisioning. Thus , they guarantee to get a medal while competing in final with a low level of ability group.

Since the motive of the swimmers who compete under the rules of Federation International de Natation Amateur *FINA* - especially the high level of competition - is to reach the final , and the motive of the best eight swimmers who reached the final is trying to get a medal or having an advanced place, they demonstrate their maximum effort in both heats and final. According to the swimmers' motives and referring to the stability from attempt to another as a characteristic of performance in events which are measured in time (*Schmidt 1991*), it is expected that the difference between the heats and the final records will be limited within a specific range.

This study aims at identifying the time differences between the heats and the finals for some groups of able-bodied , physically disabled and mentally retarded swimmers who participated in 50 m free style in international championships under the rules of *FINA* . The result of comparing these time differences with others of 50 m free style in *SO* competitions could be considered as a criteria which will be helpful to have an equitable competitions in Special Olympics swimming events.

Method

Subject

Records of heats and finals of 80 men swimmers (first group) who reached the final of 50 m free style at the following championships were collected : Olympic Games, Atlanta 1996 (*FINA*, 1996) ; V11 world Championship, Rome 1994 (*FINA*, 1994); 111 African Junior Swimming Championship, Cairo 1994 (African Swimming Federation 1994); Paralympic Games, Barcelona' 92 (Barcelona Paralympic Organizing Committee, 1992) and Paramarid' 92 (Madrid Paralympic Organizing Committee, 1992).

The African Championship had two finals for two different classes of age, 13 years old as class A and 15 years old as class B. Also, the Paralympic Games , Barcelona for the physically disabled included five finals for 50 m free

for five classes of disability. These championships were organized under the rules of *FINA* (Table 1).

Table 1 Distribution of the First Group Swimmers Participating in the International Championships

Championship	Class	No. of Swimmers	Total (n=80)
Olympic Games, Atlanta 1996		8	08
World Champ., Rome 1994		8	08
African Junior Champ., Cairo 1994	A	8	16
Paralympic Games, Barcelona 1992	B	8	
(Physically Disabled)	S6	8	
	S7	8	
	S8	8	40
	S9	8	
	S10	8	
Paramadrid, 1992 (Mentally Retarded)		8	08

The second group consisted of the records of preliminaries and finals of 180 mentally retarded swimmers at Special Olympics World Games, 1995 (Special Olympic World Games, Connecticut, 1995).

Data Analysis

Range of difference between heats and finals records for the first group *FINA*, preliminaries and finals records for the second group *SO* and the percentage of these differences were calculated. Swimmers frequency and swimmers ratio according to the percentage of difference were also determined.

RESULTS

The statistical analysis indicates that the mean each range of difference and the percentage of difference for the first group *FINA* was less than the mean of the second group *SO*. Means were 0.36 seconds \pm 0.21 and 1.19% \pm

0.57 for the first group and 0.86 seconds ± 1.85 and 1.80% ± 3.08 for the second group respectively (Table 2).

Table 2 Mean and Standard Deviation of Range of Difference and Percentage of Difference for the First Group FINA and Second Group SO Swimmers

Group	Range of Difference (sec)		Percentage of Difference (%)	
	Min.	Max.	Min.	Max.
<i>FINA</i> (n= 80)	- 0.12	1.56	- 0.73%	5%
	M 0.36		M 1.19%	
	SD 0.21		SD 0.57	
<i>SO</i> (n= 80)	- 21.21	14.07	- 28.33%	26.93%
	M 0.86		M 1.80%	
	SD 1.85		SD 3.08	

The range of difference in seconds and the percentage of difference for the first group were also less than the second group as shown in Figure 1 and Figure 2. The range of difference varies from -0.12 to 1.56 seconds for the first group, whereas it was between -21.21 to 14.07 seconds for the second group. The maximum percentage of difference for the first group was 5% only but it reached 26.92% for the second group.

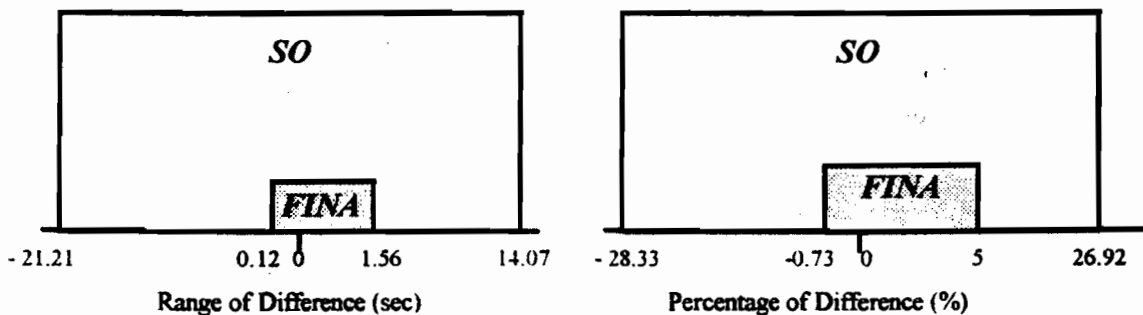


Figure 1- Range of Difference for FINA and SO Swimmers

Figure 2- Percentage of Difference for FINA and SO Swimmers

The records of 15% of the first group have decreased (Table 3), whereas 85% of the swimmers records have improved as shown in Figure 3 up to < 5% of their heats scores.

Table 3 Frequency and Ratio of First Group Swimmers FINA According to the Percentage of Difference ($n = 80$)

Decrease	Percentage of Difference (%)									Total
	Improvement									
	up to < 1%	1% 1.5	1.5% < 2%	2% 2.5	2.5% < 3%	3% 3.5	3.5% < 4%	4% 4.5	4.5% < 5%	
12	23	18	11	6	5	2	-	1	2	80%
15	28.75	22.50	13.75	7.50	6.25	2.50	-	1.25	2.50	100%
15	85									100%

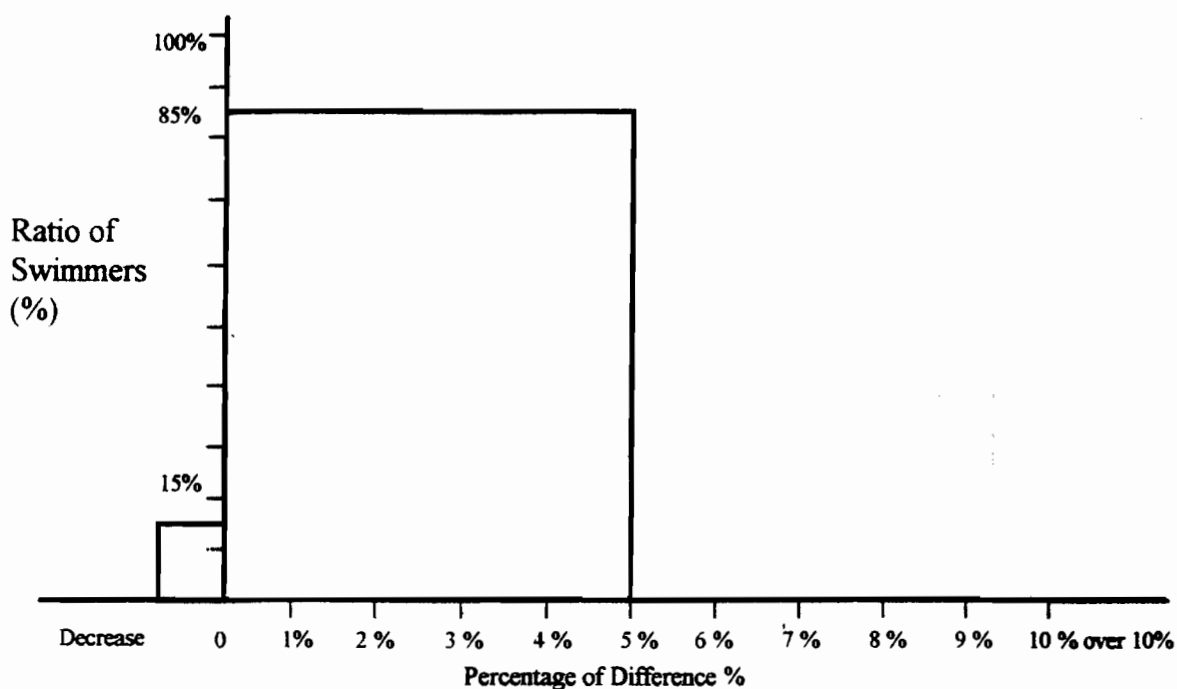


Figure 3- Ratio of FINA swimmers according to the percentage of difference between their heats and finals records

Table 4 shows that records of 80.55% of the second group swimmers have changed up to < 5% improvement, 9.45% of them have achieved an improvement ranging between 5% - < 10% of their preliminaries records and 10% of swimmers accomplished more than 10% improvement (Figure 4).

Table 4 Frequency and Ratio of Second Group Swimmers According to the Percentage of Difference ($n = 80$).

Decrease	Percentage of Difference (%)										Total										
	Improvement					Test															
up to	1%	1.5%	2%	2.5%	3%	3.5%	4%	4.5%	5%	5.5%	6%	6.5%	7%	7.5%	8%	8.5%	9%	9.5%	10 & over		
>1%	>1.5%	>2%	>2.5%	>3%	>3.5%	>4%	>4.5%	>5%	>5.5%	>6%	>6.5%	>7%	>7.5%	>8%	>8.5%	>9%	>9.5%	>10%			
65	21	9	12	8	7	6	8	3	6	3	1	2	3	3	1	3	-	-	1	18	180
36.11	11.67	5	6.67	4.44	3.89	3.33	4.44	1.67	3.33	1.67	.56	1.11	1.67	1.67	.55	1.67	-	-	.55	10	10
36.11										44.44											
80.55										9.45											
																				10	100%

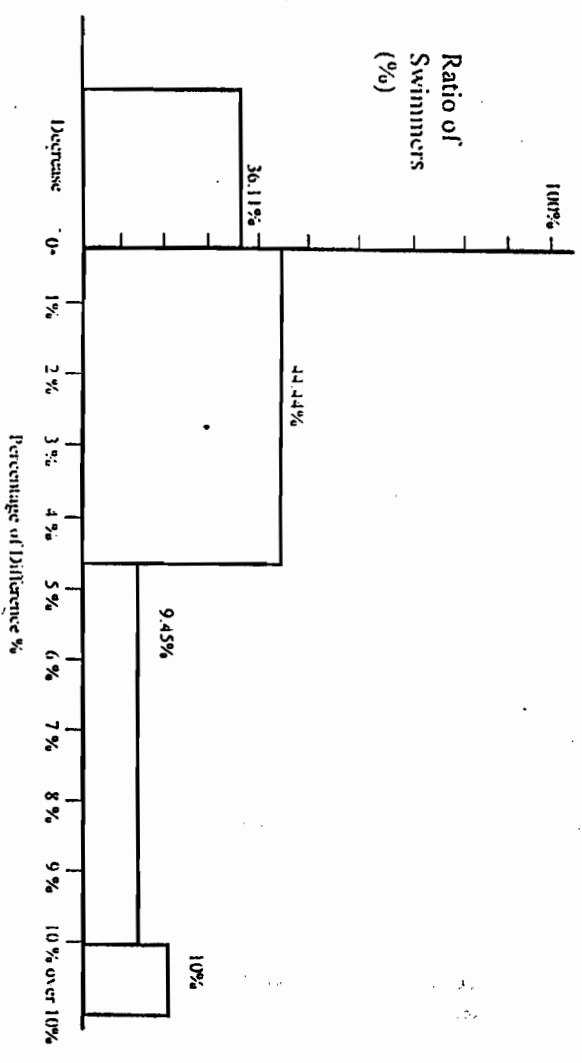


Figure 4- Ratio of SO swimmers according to the percentage of difference between their preliminaries and finals records

DISCUSSION

Special Olympics competitions are designed to provide fair and equitable conditions of competition, and promote uniformity so that no competitor shall obtain unfair advantage over another. In order to accomplish this, rules of *SO* state that any athlete in timed and measured events who completes an event at a score 15% better than the preliminary or reported score shall be subject to disqualification (special Olympics International, 1996). From the researcher's point of view, this wide range of difference would not help to maintain fair competition in the finals, or guarantee the honest effort in the preliminaries. The recent study shows that the majority (80.55%) of *SO* swimmers records have varied between decrease and improvement up to 5% of their preliminaries records, 9.45% have improved by 5% - 10% and only 10% of swimmers have improved over than 10%. In addition, the analysis of 1995 Special Olympics swimming results indicated that 40.45% of swimmers records have decreased, 54.09% have improved by 5% - 10% of their preliminaries records, 3.38% have improved by 10% - 15% and 2.09% have improved over than 15% (special Olympics International, 1995). Although that analysis did not show the ratio of swimmers who have improved up to 5%, but generally, it agrees with the results of the recent study where the majority of swimmers (90%) have improved up to 10% of their preliminaries records.

Analysis of 50 m free results in the international championships that were organized under the rules of *FINA* clarifies that the powerful motive and nature of competitions are encouraging the swimmers to perform with their maximum effort in both heats and finals. Although these championships included different kinds of swimmers, seniors and juniors able-bodied swimmers, physically disabled and also mentally retarded swimmers, but the rules of competitions encouraged them to demonstrate their maximum speed. The improvement in finals records of this group was limited by 5% better than their heats records, and only 2.5% of the swimmers who have accomplished this improvement. Also, it was noticeable that with the increment of improvement ratio, the number of swimmers was decreasing. It means that the

swimmers were performing with their maximum speed in both heats and finals, so that the difference between their heats and finals records were limited. This results confirm that the performance in events which are measured in time has a character of stability from attempt to another (Schmidt, 1991). Thus, it is supposed that in the presence of appropriate reinforcement and positive directions, swimmers in Special Olympics Competitions will achieve the same range of improvement. As it was previously mentioned, the recent study shows that the records of 80.55% *SO* swimmers have changed between decrease and improvement up to 5% of their preliminaries records. It is expected that the rest (19.45%) of *SO* swimmers would not achieve their wide range of improvement if they compete under the rules of *FINA*.

The researcher considers that in *SO* swimming events, one of the fundamental reasons behind the swimmers undesired behavior of decreasing their speed in preliminaries refers to some coaches. The coach is the person who knows the rules of *SO* events, gives the information, directions to the swimmers and has the responsibility to encourage and reinforce his athletes. Some coaches follow that undesired behavior and look forward to the objective of winning regardless of the cost. They forget that through sport their athletes can develop morally and learn a basic code of ethics that is transferable to a moral code for life (Martens, 1990). From the researcher's point of view, it is not fair to disqualify a swimmer because of his coach's fault. The swimmer will ask himself about the reason that prevents him to get a medal in spite of following the coach directions in preliminary and final. In order to accomplish *SO* objectives regarding having equitable competitions at 50 m free in swimming event, it is suggested to eliminate the coach whose swimmer's record would be improved in the final more than 5% of his preliminary record. This range will force coaches to encourage their swimmers to perform with their maximum speed in both preliminaries and finals. It is also suggested to conduct other studies concerning different timed and measured events for men and women in Special Olympics Competitions.

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