

*** Introduction and research problem .**

a lot of nations in the recent years at the beginning of the seventies of the 21 st century has interested in reconsidering planning and organizing for sport activities on a scientific basis through developing the performances therefore , they cared for sportive training as one of the most important organized educational disciplines in physical education.

Struggle between the leading countries led to hitting international records and scores made them consequently care for scientific research in athletic training and implementing technology in this field to develop all the variables relate to training operation .

physical preparation as an essential part in the sportive training operation aims to develop the level of performance that his ability can achieve. This preparation contributes in developing the necessary physical traits relate to the sportive activity that the player practices and working on its continuing development .

the majority of training scientist emphasized that the physical abilities are the main component which the other abilities are built to achieve the highest levels. Development the physical abilities connect with developing motion skills as the player can master the essential motion skills for the sportive activity he chooses. Training these physical abilities is one of the effective factors to develop the level of performance in the sportive activities and the physical abilities vary according to the sportive activity. The more we develop the physical abilities, the more we raise the level of skill performance

achieving an advanced numerical level depend on what the swimmer owns from capabilities, physical abilities as losing these abilities lead to the inability to achieve advent numbers. Title b musher (1972) indicated that individuals numerical differences are real representations for their body and physical abilities.

This emphasizes that developing the abilities relate with behavioral performance level in the different activities which help the individual to make the skill in its best form. Singer indicates that raising the level of performance cannot be achieved expect for the presence of private physical abilities.

Abol ela (1994) indicates that swimming private physical abilities should be highlighted in training as highly contribute in their effect to achieve better time and consequently. The swimmer can achieve numerical level for his race.

Private physical fitness means players ability to cope with highly intensive training with the ability to natural coping in a highly way.

Aly A.(1995) indicates that identifying personal motion abilities highly contribute in determining the suitable athletic activity that he can best achieve results and hitting international records.

During the researchers work as a teacher and a trainer in upper Egypt he noticed that there are low scores in butterfly swimmers records weather in minia championship or republic championships as the players achieved low scores that do not suit the geographical extension of upper Egypt.

Through the previous overview of physical abilities role in numerical improvement and after reviewing literature that deal with swimming training (ostrowska 2002), Santana et al (2002) nabih A.(1992) , afify A. (1981) , musa .C (1997) , basim A.(2000), el gamal S.(1990). The research observed as to his knowledge_ that there is no independent study deal with the importance of developing butterfly swimmers physical abilities

although, there are some studies that deal with this field partially , consequently, the research choose this subject for its demanding need for the community.

***Research aims :**

the main research aims to design a suggested training program and studying its effect on :

- 1- Some physical abilities of butterfly swimmers ,speed, fluency, competence , power and airless abilities.
- 2- Numerical level of 50m butterfly swimmers.
- 3- recognize the contributing percents of private physical abilities in achaiving numerical levels for 50 m butterfly swimmers.
- 4- Find the correlation between the selected physical abilities which are under studies and the numerical levels of 50 m butterfly swimmers

***Research Hypothesis**

- 1-There are significant mean differences between the medium the pre-post test of the controlling groups in some physical abilities of butterfly swimmers and the time of 50 m butterfly swimmers.
- 2-There are significant mean differences between the medium the pre-post test of the experimental groups in some physical abilities of butterfly swimmers and the time of 50 m butterfly swimmers.
- 3-There are significant mean differences between the medium of the measures of controlling and experimental groups in some selected physical abilities speed , flexibility, competence, power, airless abilities and the time of 50 m butterfly swimmers for the experimental groups .
- 4- the expected developing percent will be 20% for experimental groups in private physical abilities (speed, flexibility, competence, power, airless abilities and the time of 50 m butterfly swimmers for the experimental group..
- 5- there are different contributing rates of the private physical abilities that are under studies in the numerical level of 50 m butterfly swimmers.
- 6- according to the sample of the experimental research there is a mean correlation between the private physical ability that are under studies in the numerical level of 50 m butterfly swimmers.

***Research Procedures and Methodology- Research syllabus**
the research used the experimental designer of the pre-post measures to suit the nature of the main research

***Research Sample**

16 swimmer from assiuot club, they were chosen on purpose and randomly divided into controlling and experimental group

***Data Collection Tools**

- physical tests and measures
- 50 m butterfly time measure
- centimeter total length for swimmer
- weight in kg
- Back muscles power
- Arms muscles power
- Legs muscles power

- Test power
- Arms flexibility (vertical – horizontal)
- Waist flexibility [back – front]
- Foot front flexibility
- Swimming speed test
- Aurg-ometric test for airless abilities measurement

***Research Procedures**

- designing a questionnaire to determine butterfly swimming physical abilities and determining the suitable test and evaluating the suggested program.
- A pilot study to validate test
- A pilot study to experiment the program
- Program application

Statistical Treatment

- Arithmetic means
- Standard divinations
- Skewness
- Improving percent
- Stepwise regression
- t. test
- correlation facto

***The Result**

in the light of research objectives, sample and statistical treatments the research concluded the following:

there are significant mean differences between the pre-post test for the experimental group.that Improving percents in 50 m butterfly variable were (7.99) , improving percents in waist fluency for front , back , foot , horizontal arms, vertical arms were (25) (8.59) (8.59)(17.20)(26.44) and for right fest , left fest , back muscle , legs power , arms were (20.34) , (15.70) , (9.92) , (22.56) , (20) and speed variable (17.71), competence (9.69), airless was (20)

there are significant mean differences between the pro-posts test for the experimental group as 50 m butterfly time was (2.25) , front waiste fluency , back fluency , vertical arms , horizontal arms fluency .

right test power , left test power , back power , arms power , speed and airless abilities all for the experimental group. T percent were (3.88) , (2.75) , (3.36) , (2.46) , (3.18) , (2.56) , (2.75) , (3.56) , (2.25) , (1.92) , (5.03) expect foot front fluency , legs power , competence were not significant as they were less than T table value , they were (0.50) , (0.61) the study proved that (fluency) variable was the most significant contributor in the numerical level (94%) the study proved the correlation between physical abilities and 50 m butterfly as the statistical correlation were as follow:

- Test power (right) and 50m. butterfly time, where correlation (0.76-), it is significant at the level of (0.05) At Degree of Freedom of $n-2=6$
- Test power (left) and 50m. butterfly, where correlation (0.79-), it is significant at the level of (0.05)
- Arms power test and 50m. butterfly time , where correlation (0.77-), it is significant at the level of (0.05)
- speed test and 50m butterfly time, where correlation (0.76), it is significant at the level of (0.05)
- competence test and 50m butterfly time where correlated (0.71), it is significant at the level of (0.05)
- airless abilities test and 50m butterfly time where correlated (0.71-) it is significant at the level of (0.05)
- The researcher explains this relation between the tests and the numerical level to the scientific logic where this relation is negative in its figure as arithmetic but it indicates to a positive significance to the numerical level of the swimmers, this leads to development and consequently the improvement in the muscular power which affects the numerical level improvement .

***Research Recommendations.**

In the light of research results, explanation and sample, the researcher recommends the following:

- Proceeding the main study on other swimming method of different ages and distances to identify the role of physical abilities in achieving numerical achievement.
- Using the suggested program to develop butterfly swimmers private physical abilities.
- Upper Egypt teams training should care for developing swimming private physical abilities to achieve numerical achievement.



**Faculty of physical Education
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**A suggested Training program for developing some private
physical abilities and its relation with numerical level of
butterfly swimmers**

**A Research As part of The requirements of The philosophy Doctor in physical education
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