

## The effectiveness of yoga exercises, on the level of kinetic balance, and the functional fitness for Elderly

\***Dr / Mohamed Mohamed Abdel Salam**

### Introduction and research problem:

It is considered that aging process is a normal physiological process happening to anyone, influenced by lifestyle, and a number of environmental and genetic factors, it is not a satisfactory condition, as it is a gradual process, in which physiological changes, and physical occur slowly, and that cannot be stopped, but it can reduce its harm, in the case of interest in the integrated health care, and good health habits. That's through regularity in sports practice.

"**Kamal Abdel-Hamid, Mohammed Subhi Hassanein**" (2009) indicate that, the physiological, psychological, social changes happen to the seniors, usually

cannot be avoided, or get rid of them, but it can be resisted successfully, reduces them, and deal with it positively by an elderly one, through a good and rapid adaptation with the society so live a quiet social life. (64:11).

"**Hellstrem et all**" (2000) believed that physical activity helps to improve public health, but the codified programs for physical activities are better, especially as helping elderly, to abide by specific doses of physical activity enough to achieve most of the health benefits desired from regularity of physical activity. (548:22).

"**Afaf Abdel Monem Darwish, Mohammed Jaber Briva**" (2000) had shown that the stage of elderly starts when the demolition of the cells occurs more than construction,

---

\* Assistant Professor , Department of Sport Elderly- Faculty of Physical Education for men - Helwan University.

and be accompanied by a lack of both muscle activity, compatibility the action of muscles, also a decrease in the body's use of oxygen, and there are several diseases can be exposed to seniors, including (heart disease, atherosclerosis, obesity, diabetes, lack of secretion of certain hormones, such as melatonin responsible for improving the quality of sleep, and relieve insomnia (15:10).

On the other hand, "**Phyllis stein et all**" (1999) believe that, aging affects the equilibrium and stability of body, through the inner ear action, and the integration of the sense of sight, with the sensory system, so the low level of equilibrium concerning uprightiness of the body, as well as the slow-motion of seniors, exposes them to fall accidents, falling, and thus injury. In spite of that, the occurrence of falling may be caused by several other factors, such as the use of medicines,

intellectual status, surrounding environmental risks, the lower in the level of neuromuscular power and compatibility, but the scientific evidences confirm that, improvements on the stability of body, and equilibrium are resulting from the physical activity, which reduces the probability of falling. (679:29)

"**Lynn Goldberg, Diane Elliot**" (2000) explained that when the individual elderly being of bed rest, the muscles of the body lose 2% of their strengths every day, and stay in bed for (one month), it may lead to decrease in strength, by more than (50%), note that the intense exercise, the frail elderly in the age group between (80-100) years, showing none of them had not been subjected to sudden death during intense exercise. (23:194-197).

"**Bahaa Eddin Ibrahim Salama**" (2009) believed that the human body needs to the movement both for the

development of its vital functions, and kinetic or to maintain them, and therefore should pay attention to sports, which is doing its part in this field to maintain the vitality of the body, and its activity, who are practiced physical activity regularly ,features a good health, being able to carry out the requirements of life, both in his work, or life easily and protect him from incidence of a lot of diseases, especially blood pressure and hardening of artery disease.(3:151)

**"Sameer Hussain Al Ansari" (2000)** indicates a that there is a positive relationship between regular exercise and aging, which is evident by helping to maintain, on the ability to live independently from the risk of bone fractures, and the risk of death from (heart disease, control in the level of blood pressure, prevention of colon cancer, diabetes) and help keep bones and joints, and muscles healthy, pain control, sense of

activity, vitality, keep the balance, and agility this resulting in reducing the probability of falling, as physical activities help to abandoned elderly from unhealthy habits, such as smoking, use of alcohol and improve their awareness as a result of the evolution of the physical abilities, mental, and earn individual nicer look toward life.(22:7).

\*Assistant Professor ,  
Department of Sport Elderly-  
Faculty of Physical Education  
for men - Helwan University.

**" Milada Krajci" (2003)** believed that exercises of yoga, help to improve the general fitness of the body and works to get rid of anxiety, insomnia, stress, mental fatigue, and improve the clarity of mind, and helps to a good thinking. (25:25)

In this regard **"Malesa, Damodran"(2000)** mention that the exercises of yoga work to increase blood flow to the muscles, and this increase

helps to wash toxins from the body, thereby increasing the activity, as well as working to raise the nervous system efficiency, and improve the functioning of nerve signals, and thus improve the balance of individuals, And working to raise the efficiency of the action of the musculoskeletal system with the nervous system, and improve the harmony between them, leading to improve nervous muscular compatibility , contribute to increase focus, improve memory, to recognize situations clearly and properly, also working to increase the individual's ability to imagine, relaxation, and improves him with confidence in himself and his abilities, so yoga exercises dealing with both the body and the mind. (24: 146)

"**Howayda Ali Asraa**" (2008), "**Rafe Zaglul, and Emad Abdul Rahim** (2007) " agree that the exercises of yoga are the best sports healthy system, it's a sports system

consists of a series of profiles are carried out in a sequential manner, and the exercises of Yoga does not need to equipment, or tools, It can be practice it at any time and any place, it is suitable for all ages, also the exercises of yoga increase the flexibility of the body, and increase the strength and suppleness of the joints, ligaments, and tendons, which allows a wide range of motion, smooth in performance, the adoption of muscle tone, and that the practice of Yoga exercises achieve the benefits of fitness in general. (35:14) (5:34)

It have been pointed out the results of numerous scientific studies, which dealt with exercises of yoga, such as the study of "**Basma Fareed Khaled** " (2012) (2), the study of "**Hala Mohamed Fouad**" (2012) (13), the study of "**Elham Abdel Azim Faraj and others**" (2005 ) (1), the study of "**Rim Mohsen Hassan**" (2004) (6), and the

study of "**Shad Timmer Mans**" and **others (2003)** (17) who pointed out the importance of the profound benefits to the individual in all aspects of the yoga exercises That help to improve physiological efficiency represented in the improvement of the functions (heart and lungs) and improving blood circulation, as well as exercises of yoga work to improve the level of poise, especially the elderly , and in Egypt currently points, the official website of the Egyptian Central Agency for Public Mobilization and Statistics in 2013, that the population reached 85.5 million people and amounted proportion of Elderly people above 65 years old, about 3.75 million people of the total population of Egypt.(27)

Which prompted the **researcher** to conduct this study, in an attempt to monitor the importance of the practicing of yoga exercises,

on the health aspects of the elderly, and the level of kinetic poise from (65-70) years.

### **The research aim**

Identify the effectiveness of yoga exercises on the level of kinetic poise, and the functional fitness for elderly through: -

- The level of kinetic poise for elderly from (65-70) years.
- The level of functional fitness for elderly from (65-70) years.

### **Research hypotheses**

1. There are statistically significant differences between the averages of pre- and post-measurements, in the level of kinetic poise, functional fitness for the experimental group, and in favor of the post measurement.
2. There are statistically significant differences between the averages of pre- and post-measurements, in the level of kinetic poise, functional fitness for the controller group, and in favor of the post measurement.

3. There are statistically significant differences between the averages of pre- and post-measurements, for the two-research groups the controller and experimental group in the level of kinetic poise, functional fitness, for the elderly and in favor of the experimental group.

### **Research procedures**

**The research method:** The researcher used a semi experimental method, the design of pre-and post-measurements for two groups, one of them is experimental and the other is controller, as it suits the research aim.

**The research community:** Representing the research community in the elderly men of the members of 6th October Club, which aged between (65-70) years and they were registered as practitioners of the sports for all records, in the club.

**the research sample:** was selected research sample

purposively of elderly men 6th October Club, which aged between (65-70) years totaling 19 men, (3) men were excluded from the research sample, who have non-commitment of all application days for tests of the pre-measurements, and the proposed program. Thereby the research sample become (16) men, the rate of (4) men of elderly as an exploratory sample, (12) core sample was divided into two equal groups, the strength of each group (6) Elderly men who have attended the sports practicing and have the desire to take part in the proposed program, it have been verified the homogeneity of research sample through the arithmetic average, standard deviation, and sprains coefficient in the growth rates (Age, height and weight) and the level of kinetic equilibrium and functional fitness of the sample individuals of elderly men as shown in Table (1).

**Table (1)**  
**Homogeneity in growth rates (age - length - weight) and the level**  
**of kinetic equilibrium and Functional fitness for the Elderly**  
**N = (16)**

	Parameter	Measuring Unit	Average	Standard deviation	Mediator	Torsion modulus
Growth rates	Age	Year	66.69	0.97	66.8	0.675
	Length	Cm	166.71	2.20	167.5	-2.14
	weight	Kg	74.37	2.30	75.00	-0.794
Kinetic equilibrium	Balancing on the panel poise	Sec	7.50	0.516	7.5	Zero
	Balancing on the panel poise with closed eyes	Sec	5.25	0.408	5.00	0.419
Functional fitness	Pulse rate	Pulse/min	69.25	2.79	69.00	0.0419
	systolic blood pressure	Mm/Hg	77.00	2.00	78.00	-0.285
	diastolic blood pressure	Mm/Hg	139.93	2.40	140.00	0.345
	ratio of blood saturation of oxygen	%	70.5	2.98	71.00	-0.196
	audio reaction speed	g/s	39.68	2.330	40.00	-0.543
	optical reaction speed	g/s	40.81	1.167	41.00	-1.02

Table (1) shows that the torsion coefficient for the research variables is confined between ( $\pm 3$ ), located under the equinoctial curve, which

shows the homogeneity of the sample.

#### **Data collection methods and tools**

**1- Data collection tools:** "the researcher" used rest meter device for measuring the weight (kg) and height (cm) - a tape measure - an electronic watches timer to the nearest second – a panel poise – Safjamano meter device for measuring systolic and diastolic blood pressure - a device for measuring ratio of blood saturation of oxygen - a device for measuring the acoustic and visual reaction speed of in the hands.

**2- Data collection methods:** "the researcher" relied on the analysis of Arab and foreign References - international information network - two forms of survey for experts on both:

The first form contains the functional fitness elements and kinetic equilibrium tests for elderly men (65-70 years) (Attachment 2).

The second form determinants of construction of the proposed program for yoga exercises (Attachment 4).

The third form the exercise that used according to the parts of the practice modules (introductory activity - the main activity - the final activity) to the proposed program for yoga exercises for the elderly men (65-70 years) (Attachment 5).

The steps to build the Data collection tools:

that have passed the following steps:

- **Determine the functional fitness elements, poise and kinetic tests, for the elderly men (65-70 years):** the first and special questionnaire form of the elements of functional fitness, and tests of kinetic poise, for elderly men (65-70 years) (Attachment 2) has been presented to the experts, Attachment (1), and the researcher has accepted, the percentage of (80%) and more for acceptance, and so the most important elements of functional fitness for elderly men (65-70) are (pulse rate - blood pressure - percentage of



blood saturation of the oxygen - the speed of sound reaction - the speed of visual reaction ) as shown in table (3) Attachment (7) and that the most important measurements of kinetic poise for the research sample tests are (the poise on the poise board - poise on the poise board with the closure of the eye) as shown inn table (4) Attachment (7).

• **Determine the tests under discussion:** In light of what has resulted from experts' agreement percentage, that have been identified for measuring kinetic poise tests, as well as the special tests of functional fitness for elderly men (65-70 years) Attachment (3).

The steps to build the proposed program for yoga exercises: (under discussion) it has passed the following steps: -

After being briefed on the references by the researcher, the specialized scientific studies in yoga exercises that

Including "Elham Abdel Azim Faraj, Amal Mohamed Morsy" (2005) (1), "Hussein Wali Hussein" (2008) (4), "Rim Mohsen Hassan" (2004) (6), "Mayada Mohamed Al Akhdar" (2007) (12) he has prepared "the form of construction determinants of the proposed program," Attachment (4) as follows: -

- Put the construction determinants of the proposed program for yoga exercises for elderly men (65-70 years): the second and special questionnaire form of construction determinants of the proposed program for exercises of yoga has been presented on experts who specialist (Attachment 4) in recreational programs, sports for all, exercise, sports physiology, and who concerned with the elderly, and the number of experts is (6) (Attachment 1), the highest percentage of is agreement for each element has been accepted, as shown in table (5)

Attachment (7), and were as follows: -

- The organizational aspects for the proposed program: Duration of the program (3) months, spread over 12 weeks, the rate is (3) units per week, as weekly exercise, the time of each unit (60) minutes.

- The temporal distribution of practice unit parts: the primer activity (warm-up) of (10) minutes, the main activity (yoga exercises) rate of (45) minutes, the final activity rate of (5) minutes.

- Determine the exercises that used in the proposed program: it has been preparing the third and special questionnaire form of used programs according to the parts of the practice units for the proposed program for yoga exercises for the elderly men from (65-70 years) Attachment (5), and present it to the experts, which the researcher took into account what follows:-

1. Defining the aim of yoga exercises:

- Improvement of the level of kinetic pose for elderly.

- Improvement of the level of functional fitness for elderly.

2. Determine the foundations to put yoga exercises program:

- Taking into account the aim of the exercises of Yoga program is the development of level of functional fitness and the level of kinetic poise for the elderly (65-70 years).

- Appropriate program content to the growth characteristics of the elderly (65-70 years).

- The flexibility of the program and its acceptance for practical application.

- Follow the scientific method in the implementation of the program, commensurate with the age phase for the research sample,

- Taking into account the inclusiveness and accuracy in the selection and implementation of the program.

Total exercises that used have reached according to the parts of practice units for the proposed program for yoga exercises for elderly (65-70 years), in the initial image (89) exercises distributed on the primer activity rate of (42) exercises, (32) exercises for the main activity, (15) exercises for the final activity as shown table (6) Attachment (7).

And that the total excluded exercise according to the expert opinions, which have got agreement percentage less

than 75%, has reached (15), exercise, and were as follows: -

- (7) exercises have been excluded from the total (42) exercises from the exercise of preliminary activity and bringing the number of exercises (35) exercises.
- (5) exercises have been excluded from the total (32) exercises from the exercise of main activity and bringing the number of exercises (27) exercises.
- (3) exercises have been excluded from the total (15) exercises from the exercise of final activity and bringing the number of exercises (12) exercises.

***Presentation, interpretation, and discussion the results***

**First: showing results:**

**Table (2)**  
**Significance of differences between the pre, and post**  
**measurement in the level of kinetic poise, and functional fitness**  
**for Elderly of the experimental research group. (N = 6)**

Parameter	Measuring Unit	Pre-measurement		Post measurement		The difference between two averages	The improvement percentage	T Value	Significance level
Balancing on the panel poise	Sec	7.41	0.37	13.16	0.47	5.75	77.59%	2.85	Signify
Balancing on the panel poise with closed eyes	Sec	5.08	0.37	9.83	0.23	4.75	93.50%	2.41	Signify
Pulse rate	Pulse/min	70.33	3.32	66.83	1.67	3.50	5.23%	2.62	Signify
systolic blood pressure	Mm/Hg	76.66	1.75	71.66	2.62	5.00	6.97%	2.85	Signify
diastolic blood pressure	Mm/Hg	139.66	1.63	131	2.94	8.66	6.61%	2.62	Signify
ratio of blood saturation of oxygen	%	72.00	2.52	84.30	1.67	12.30	17.08%	2.45	Signify
audio reaction speed	g/s	38.83	2.31	33.5	0.95	5.33	15.91%	2.84	Signify
optical reaction speed	g/s	41.00	0.89	34.66	0.47	6.34	18.29%	2.66	Signify

The value of tabulated (T) at the significance level (0.05) = 1.708

Table (2) shows that there are statistically significant differences between the averages of pre-and post-measurements, in the level of functional fitness, and kinetic poise for the elderly men (65-

70 years) for the experimental research group. As that came the value of calculated (T) is greater than the Tabulated value at the significance level (0.05).

**Table (3)**  
**Significance of differences between the pre, and post**  
**measurement in the level of kinetic poise, and functional fitness**  
**for Elderly of the controller research group (N = 6)**

Parameter	Measuring Unit	Pre-measurement		Post measurement		The difference between two averages	The improvement percentage	T Value	Significance level
Balancing on the panel poise	Sec	7.41	0.58	7.05	0.30	0.36	5.10%	-1.02	No Signify
Balancing on the panel poise with closed eyes	Sec	5.50	0.44	5.33	0.37	0.17	3.18%	-1.22	No Signify
Pulse rate	Pulse/min	70.00	1.54	69.66	1.24	0.34	0.48%	1.63	No Signify
systolic blood pressure	Mm/Hg	78.16	1.722	80.33	2.05	2.17	2.77%	-1.21	No Signify
diastolic blood pressure	Mm/Hg	141.00	2.82	137.5	4.78	3.50	2.54%	1.65	No Signify
ratio of blood saturation of oxygen	%	68.00	2.44	69.5	0.50	1.50	2.20%	1.54	No Signify
audio reaction speed	g/s	41.33	1.75	40.33	0.94	1.00	2.47%	1.75	No Signify
optical reaction speed	g/s	40.38	1.169	39.83	1.06	0.55	1.38%	1.32	No Signify

**The value of tabulated (T) at the significance level (0.05) = 1.708**

Table (3) shows that there are no statistically significant differences between the averages of pre-and post-measurements, in the level of functional fitness, and kinetic poise for the elderly men (65-

70 years) for the experimental research group. As that came the value of calculated (T) is greater than the Tabulated value at the significance level (0.05).

**Table (4)**  
**Significance of differences between the two dimensions' measures**  
**for the two sets of experimental, and controller of the research**  
**groups in the level of kinetic poise, and functional fitness for**  
**Elderly (65-70) years. (N 1 = N 2 = 6)**

Parameter	Measuring Unit	The Experimental group		The Control group		T Value	Significance level
Balancing on the panel poise	Sec	13.16	0.47	7.05	0.30	2.45	Signify
Balancing on the panel poise with closed eyes	Sec	9.83	0.23	5.33	0.37	2.68	Signify
Pulse rate	Pulse/min	66.83	1.67	69.66	1.24	2.64	Signify
systolic blood pressure	Mm/Hg	71.66	2.62	80.33	2.05	2.48	Signify
diastolic blood pressure	Mm/Hg	131	2.94	137.5	4.78	2.62	Signify
ratio of blood saturation of oxygen	%	84.30	1.67	69.5	0.50	2.11	Signify
audio reaction speed	g/s	33.5	0.95	40.33	0.94	2.87	Signify
optical reaction speed	g/s	34.66	0.47	39.83	1.06	2.61	Signify

The value of tabulated (T) at the significance level (0.05) = 1.708

Table (4) shows that there are statistically significant differences between the averages of pre-and post-measurements for the two-research groups experimental, controller in the level of functional fitness, and kinetic poise in a favor of the

experimental group. As that came the value of calculated (T) is greater than the Tabulated value at the significance level (0.05).

**Second: Interpretation, and discussion of the results:**

Table (2) shows that there are statistically

significant differences between the averages of pre and post measurements, in the level of functional fitness, and kinetic poise for the elderly men (65-70 years) for the experimental research group. as that came the value of calculated (T) is greater than the Tabulated value at the significance level (0.05). The researcher attributes this improvement to the yoga exercises of the proposed program, for elderly men (65-70 years) for the experimental group, whereas the program included simple exercise, constant, and circular movements, side, front, and rear, these exercises are similar in their usual performance of feet movements for the elderly men.

Also the researcher refers that the statistically significant differences between pre, and post measurement in the kinetic poise element under discussion for the experimental group, due to the similar yoga exercises with the performance

of the special moves of balance ,and the movements of the feet, then connect the implementation of the performance of these moves, the repetitive fixed moves , and it consider that the special poise element of the movements of the feet is very important to control the body and its muscle and nervousness members in any movement, without poise it will be easily that elderly subjected to fall , and fractures.

The researcher believe that these differences are due to the use of the proposed exercises for the proposed yoga exercises, for the development, and the enhancement the level of functional fitness for the elderly, which included exercises to develop flexibility, such as exercise, "to stand with stretch the body up, then bending to foreground, and caught the wall, by pressing the back to down, and the two arms are outstretched at full stretch, to look down to the

legs, among them the grip, feet heading forward, "and exercise a standing position bend the knees slightly and rotate the torso left and right, and the arms beside the body and look back and these exercises have been used inside the main part of the proposed program for the training of Yoga.

The results of this study are consistent with the "Elham Abdel Azim Faraj, Amal Mohamed Morsy" (2005) (1),and "Hussein Wali Hussein" (2008) (4) who stated that the use of yoga exercises have contributed to the development of the level of functional fitness for the elderly for the experimental research sample, whereas yoga exercises help to improve both the balance of the body, and increase the level of flexibility in the body, also improve the level of lengthening the muscles working in the body, help increase the strength of the joints, ligaments working on the joints, and improve

functional abilities for the practitioners of those exercises.

- Thereby the first hypothesis has been achieved, which states that "there are statistically significant differences between the averages of pre-and post measurements at the level of kinetic poise, and functional fitness for the experimental group."

Table (3) shows that there are no statistically significant differences between the averages of pre and post measurements, in the level of functional fitness, and kinetic poise for the elderly men (65-70 years) for the experimental research group. As that came the value of calculated (T) is greater than the Tabulated value at the significance level (0.05). The researcher attributed the lack of differences between the pre and post measurement, to the lack of focus of the aims of sports activities that practiced by elderly in the club to the



health problems, they practice incomplete daily life movements, so resulting in lack of improvement in the level of kinetic poise, and functional fitness for elderly men (65 -70 years), the controller research group.

"Tariq Ali Ibrahim" (2008) (9) stated that In line with the above rest, the exercises are one of the basics of life, particularly for the elderly so that enable them to carry out the requirements of their lives easily and conveniently, also multiply important in the case of aging diseases, because of the exercise of positive ability that helping to not aggravate the disease at this age.

As "**Ertan Ooptn**" (2004) (19) is also consistent with the exercise of ruled physical power that helping to compensate for the loss, which occur in muscle mass, that is associated with the natural aging of the human person, and strength training help to

improve physical fitness, and thus reduce the injury, subjected to the elderly, occurs in improved postural stability, enhance the range of motion for the elderly, and increase the flexibility of the joints.

The results of this study are consistent with "**Afaf Abdel Monem Darwish, Mohammed Jaber Briva**" (2000) (10) and "**Mayada Mohamed Al Akhdar**" (2007) (12) in the practice of systematized physical activity for the elderly, a positive impact with the level of functional efficiency.

- Thereby the second hypothesis has not been achieved, which states that "there are statistically significant differences between the average of pre-and post measurements, in the level of kinetic poise, and functional fitness for the controller group.

Table (3) shows that there are no statistically significant differences between the averages of pre-and post-

measurements, in the level of functional fitness, and kinetic poise for the elderly men (65-70 years) for the experimental research group. As that came the value of calculated (T) is greater than the Tabulated value at the significance level (0.05). **The researcher** asserts that difference is due to the clear improvement in the level of kinetic poise in the post measurement for the experimental group unlike for the post measurement for the controller group, hats because the effect of using yoga program on the experimental group without controller group. There is no the effectiveness of the development of the physical attributes of the proposed program, including its content of the exercises program are identical to the skills of everyday life, and commensurate with the features and characteristics of the stage of elderly, particularly elderly men (65-70 years). The proposed program

for yoga exercises, includes several exercises and special movements, the movements of the feet, stepping, rewinding, and turnover, which positively affect the nervous muscular compatibility, and improve the level of kinetic, which yoga characterized by.

Consequently, the proposed program, including the addition of these movements and exercises being used, within the exercises of yoga are an effective way, in poise development, and functional fitness for the elderly, and this confirms the fact that the proposed program is using the exercises of yoga that affect the kinetic balance development, and fitness functional for the experimental group, which has applied on the proposed program.

" **Assess Mint**" (2002) (15) indicates that, regularly of sports practice has a clear impact on its practitioners, as the practitioners who practice

aerobic exercises regularly, they have got physiological changes related to the heart, and various aerobic exercises lead to an increase of the heart muscle size, and as the blood circulation is working by the diastolic pressure, so the increase in the size of the heart, that lead to make heart's bigger capacity, thereby increasing the resistance of the arteries, which in turn increases the capacity and size.

As consistent "**Damo Darren**" (2002) with the foregoing that, the yoga exercises are necessary and important, to improve the level of physical efficiency for its practitioners, these exercises working on improve the efficiency of the work of the heart, respiratory system, and have major importance in improving the proportion of oxygen in the blood, and improve the level of physical fitness of the individual. (12:18).

Scientific studies have also recommended that the practice of physical exercise and changing lifestyle of the individual to increase physical activity and where that activity and movement represent the most important events that the human body needs to maintain health and reduce the risk of heart circulatory disease and stroke, high stress, obesity and osteomalacia, cancers and diabetes, In addition to its usefulness, especially for the elderly and people with special needs and chronic diseases. (95:22).

- Thereby the third hypothesis has been achieved, which states that "there is a statistically significant difference between the averages of two measurements dimensions of the two-research groups, experimental and controller in the level of kinetic poise and functional fitness of elderly and in a favor of the experimental research group."

### **Conclusions**

- Yoga exercises have affected the level of kinetic poise, represented in the tests (poise on the poise board - poise on the poise board with the closure of the eye of Elderly men (65-70 years).

- Yoga exercises have affected the level of functional fitness, represented in the tests (pulse rate - systolic blood pressure - diastolic blood pressure - the proportion of blood saturation of the oxygen - speed of the auditory reaction - speed of visual reaction) of Elderly men (65-70 years).

- There are statistically significant differences in the level of kinetic poise, functional fitness, among elderly men (65-70 years), that practitioner of yoga, and non-practitioners, and in a favor of practicing of yoga.

### **Recommendations**

1. The inclusion of the proposed program, for the yoga exercises within the sports

programs for all, for the elderly, because of its positive impact on the level of kinetic poise, functional fitness in elderly men (65-70).

2. Expand the use of yoga exercises for the suitability to the category of the elderly.

3. Conduct similar studies on the effect of yoga exercises on biological efficiency of elderly people.

4. Conduct similar studies on the effect of yoga exercises on the health and psychological problems for the elderly.

### **References**

#### **First : Arabic references:**

**1- Elham Abdel Azim Faraj, Amal Mohamed Morsy (2005):** "The effect of two programs for Alhathyoga exercises and walking on some sypncophysiology and physical variables for banks workers", research publication, Journal of Science and Arts Sports, Physical Education College for Girls in Cairo, Vol. 22, in January, Cairo.

- 2- Basma Fred Khaled (2010):** "The effect of yoga exercises on a certain level of fitness and performance for emerging kata karate", unpublished Master Thesis, Faculty of Physical Education for Girls, Helwan University, Cairo.
- 3- Bahaa Eldin Ibrahim Salama (2009):** "Exercise Physiology", Dar Arab Thought, Cairo.
- 4- Hussein Wally Hussein (2008):** "The effect of Tajik Quan Chinese training program to quickly restore misery for some individual players Duels", unpublished Master Thesis, Faculty of Physical Education, Tanta University.
- 5- Rafe Alnossir Zglul, Imad Abdul-Rahim (2007):** "Cognitive Psychology", Alshorooq House, Jordan.
- 6- Rim Mohsen Hassan (2004):** " The effectiveness of aerobic exercises and exercises yoga program over the pain down the back for ladies of age (40-45 years)", research published, Sports Science and Arts, Faculty of Physical Education for Girls, Vol. 20, the third issue, the second part, in January , Cairo.
- 7- Sameer Hussain Alansari (2000):** "New in diabetes", Dar Al Ahram, Cairo.
- 8- Shaima Abdullah Attiya (2009):** "Effect Alhathayoga on some psychological variables and the level of performance in the kinetic expression", unpublished Master Thesis, Faculty of Physical Education for Girls, Helwan University.
- 9- Tariq Ali Ibrahim (2008):** "Physiology of Sport elderly", Alwafaa house for printing, Alexandria.
- 10- Afaf Abdel Monem Darwish, Mohammed Jaber Briqaa (2000):** " Movement and the elderly", facility knowledge, Alexandria.
- 11- Kamal Abdel-Hamid Ismail, Mohamed Sobhi Hassanein (2009):** "Sports free time for the elderly", Dar Arab Thought, Cairo.

**12- Mayada Mohamed Elkader (2007):** "The effectiveness of aerobic exercise and yoga exercises on the ability to relax and facing psychological pressure program", unpublished Master Thesis, Faculty of Physical Education for Girls, Cairo.

**13- Hala Mohamed Fouad (2012):** "The impact of yoga exercises on some physical and psychological variables and the level of performance in rhythmic exercises", unpublished Master Thesis, Faculty of Physical Education, Beni Suef.

**14- Howayda Ali Alasraa (2008):** "The effect of yoga program using the Swiss ball on some of the physical and psychological variables and the sensitivity of the inner ear", published research, a scientific journal of Physical Education and Sports, First Issue, October, Cairo

**15- Assessment Of bone (2002):** Mineral Density and fracture risk from national

Junstitue of 14 earth osteoporosis and related bone diseases national resource center. April v(4)pp(801-6)

**16- Baumgartner , T. A., & Jakson, S.J (1999):** Measurement for evaluation and exercise science fifth edition Brown and Bench mark publishers .

**17- Chad timmermans. et.a l(2003):** the effectiveness yoga exersice on exity and mood for athlites.

**18- Damodaran et.al (2002):** the effectiveness yoga exercise on the psychological and physiological abilities of woman and men at the mid age

**19- Erthropietin– Hiv (2004):** Health and medical information about Hir and Aids, British National Formulary (46th edition) Bitish Medical Association of Britain , September .

**20- Gallo Samantha (2009) :** A comparison of flexibility after a single-bout of A shtanga and Bikram Yoga. California State University.

**21- Gawinski, kali (2012) :** the effects of type of yoga training on physiological and psychological fitness in college aged men and women . university of Windsor (Canada)

**22- Hellstrem, L., Wahrenberg, H. and Arner, P.** Mechanisms behind gender differences in circulating leptin levels. J. Intern. Med., 247 : 547 – 567 2000

**23- Linn Goldberg., Diane Elliot (2000):** The Healing Power of Exercise.

**24- Malathi and damodran (2000) :**the effectiveness yoga exercise on anxiety during the day.

**25- Milada krajci (2003):** mental training and breathing technique and yoga as a part of psychological training for different sport.

**26- Phyllis stein, ali ehsani** Exercise training increases heart rate variability in normal older adults JaCC Journal 1999

**27-** <http://www.capmas.gov.eg/faq.aspx>