



SWEDISH JOURNAL OF SCIENTIFIC RESEARCH

ISSN

2001- 9211

Issue 4 April

Volume 4 - 2017





**SWEDISH JOURNAL™
OF SCIENTIFIC RESEARCH**

ISSN. 2001-9211

*The Swedish Journal of Scientific Research (SJSR)
ISSN 2001-9211. Volume 4 . Issue 4 . April 2017*

No.	Title	Page
01	Counseling Needs of Students in the Institute of Physical Education, Mostaganem University, Algeria	01-07
02	The Effect of Coordination Training in Developing Some of the Skills of Women Handball Players in Sweden	08-13
03	The Effect of Physical Activity Programs to Improve Walking and Balance to Prevent Falls in Elderly People	14-21

Counseling Needs of Students in the Institute of Physical Education, Mostaganem University, Algeria

Henni Elhadj Ahmed

Professor of Psychology at the Faculty of Social Sciences, University of Mostaganem. Algeria

ABSTRACT

In the light of researches aim knowing the counseling needs for students of physical education institute. Mostaganem University. Algeria, the researcher suggest that there are many counseling needs for physical education institute students, so the researcher choose the sample by using random level method of (480) students divided into two samples for building and applying uses, to achieve goals of research the researcher build research tool represented by showing counseling needs consisted of (7) fields of (81) items, placing in front of each one three replacements (always, sometime, never) then correct them by giving marks as (1,2,3) respectively, then the researcher analyzes counseling needs in its final form on applying sample of (120) students (male and female) for students of physical education institute. Mostaganem university. After treating the results statistically, results showed that there are (38) counseling needs should be saturated inside the students of physical education institute. Mostaganem university. In the lights of research's results the researcher insisted on taking the advantages of studying counseling needs for students of physical education institute in developing counseling programs in the institute and build it on a scientific bases emanated from a real needs of students.

Keywords: Counseling needs, students, physical education, field

INTRODUCTION

The counseling need is a need of the individual to express his problems to another individual for reassurance, trust, and guidance to overcome problems and obstacles (Labidi, 1987). Sports psychologists are interested in the educational process to build a balanced approach to the athlete's personality, integrated in all its aspects, physical, intellectual and social, in order to adapt to the different circumstances of life, And to be able to face the challenges of the time and its demands

(Donahue, 1982). Educational guidance is part of the educational process. It is represented by a series of integrated activities aimed at achieving the objectives set. One cannot think of education without guidance (Zahran, 1982). Both work towards achieving healthy growth in individual sport. A balanced education touches all aspects of his personality; they must identify their problems, identify their needs and understand their behavior so that they can invest in their abilities. (Dhari, 2002). This is a fundamental objective of all sport education institutions, which is at the same time an important step in any counseling program, whether preventive or therapeutic, it must specialize to understand the nature the educational process (Touk, and Adess. 1984). It should identify the problems of intellectuals who approve of the process, enlighten them on their abilities, preferences and attitudes, helping them to adapt to their environment and the different circumstances of their lives (Abu Atiya, 1988).

Access this article online



Website:
<http://sjsr.se/>

ISSN:
2001-9211

Address for correspondence:

Henni Elhadj Ahmed, Professor of Psychology at the Faculty of Social Sciences. University of Mostaganem, Algeria.
E-mail: elhadjahmedhenni@yahoo.fr

Abraham Maslow suggests that human motivations be ranked hierarchically in such a way that the pyramid of physiological needs is located at the base while the civil-needs and needs of self-realization are even higher (Jourarad, 1974). Behavior that is adequate to meet innate needs is a learned behavior that varies among individual (Seltz, 1983). This research takes as a sample the students of the Institute of Physical Education of the University of Mostaganem. They must be well educated scientifically and pedagogically. This will depend in large part on the extent of their knowledge of their needs at this stage, as it is a critical step for the student who is confronted with the choice that determines the course of his career and his future, this explains The importance of research for the students of the Institute of Physical Education of the University of Mostaganem.

PROBLEMATIC

The psychologist's counseling needs constitute the basic part of his training because they affect his personality and his behavior. He lives most of his life to satisfy his needs, to overcome his anxieties, to reach his goals and to have a look On human life as if it were a series of needs that the individual constantly tries to satisfy (Ezzebadi, and Alkhatib 2001). Thanks to the work of some researchers at the Institute of Physical Education at the University of Mostaganem who have noticed that their students suffer from many problems and in various fields and this is due to several reasons including a lack of interest For counseling and guidance in order to overcome them. To solve the problems of the students, we must identify them, know their interests and the needs of their emancipation in the period they are going through, to offer them a psychological and educational environment adapted to the different living conditions they can to be confronted.

OBJECTIVES

- Build and apply a questionnaire adapted to the needs of students of the Institute of Physical Education of the University of Mostaganem.
- Identify the counseling needs of students at the Institute of Physical Education at the University of Mostaganem.

HYPOTHESIS

The students of the Institute of Physical Education of the University of Mostaganem have a great need in counseling.

Methodology and Research Procedures

I used the descriptive approach to match the nature of the research problem.

The researcher choose the sample by using random level method of (480) students divided into two samples for building and applying uses, to achieve goals of research the researcher build research tool represented by showing counseling needs consisted of (7) fields of (81) items, placing in front of each one three replacements (always, sometime, never) then correct them by giving marks as (1,2,3) respectively.

For the development of the questionnaire, I followed the following steps:

- Access to measurement tests in the field of sports psychology.
- Apply the questionnaire open to students to answer questions about:
- The problems they encounter at the Mostaganem Institute of Physical Education (administration, theoretical and practical lessons, and examinations).
- The material and economic problems in terms of expenditure to meet their basic needs.
- Problems of relations with their fellow students.
- Psychological problems such as withdrawal, shyness.
- Family problems: their relationships with parents and siblings.
- Physiological problems: health, diseases.

After obtaining the answers to the open questionnaire, I defined (7) following fields: educational Field, psychological field, social field, Sexual field, economic field, field of health and religious field. These fields have been proposed to specialists in educational psychology and sports psychology. Experts' responses have been subjected to statistical work using the test (K2) to see the significance of differences of experts at degrees of freedom = 1, and significance level = 0.05, shows that all fields are acceptable because they are statistically significant.

Following the responses given by the students to the open-ended question, I developed a questionnaire with

(81) items encompassing the problems in seven fields. In order to ensure the validity of these items. They were presented to a group of experts and specialists in psychology of education and sport psychology, and depending on the points of view and observations, 11 items to arrive at the final questionnaire =70 items.

The statistical methods used are as follows: The system (SPSS), the K2 for a single sample, the T Test for the significance of the differences between the averages, the simple correlation coefficient (Pearson), the alpha Cronbach to calculate the coefficient of reliability, the weighted average.

The questionnaire covered a sample of (320) students who were selected by the stratified random method in the Institute of Physical Education For the purpose of using statistical analysis Which consists of following the two contrasted groups and internal consistency methods.

RESULTS

- The two contrasted group's method:
After correcting the students' answers on the search tool, consisting of (70) items, their degrees were ranked in descending order, and then we chose

as the proportion (27%) of the upper and lower degrees which represents the two contrasted groups. Each group includes (86) students, the Statistically significant T Value is considered as an indicator to discriminate items.

- Internal consistency:
I used the Pearson correlation coefficient to determine the correlation between the marks of each item and the total result of the scale, and after obtaining the results and comparing the correlations coefficients with the Critical value of the correlations coefficients (0.159). All items are correlated to the statistical significance in level of (0.05) as shown in Table No(2).

To meet the objectives of the research, counseling needs were identified on a final sample of 120 students from the Mostaganem Institute of Physical Education.

The weighted averages of the marks were calculated to determine counseling requirements. The item that obtained a high-weighted average against the standard set = 2, is an indicator of the existence of problems in counseling need.

1-Educational field results: the ranking of items questionnaire shows that the values of the weighted

Table 1: Representing discriminate force for the T values of the items counseling needs

Items number	T values	Items number	T values	Items number	T values	Items number	T values
1	2.353	19	5.778	37	2.492	55	1.728*
2	4.617	20	4.122	38	5.119	56	1.490*
3	1.727*	21	4.411	39	4.600	57	1.191*
4	3.151	22	2.010	40	2.539	58	3.151
5	5.307	23	4.818	41	3.186	59	3.518
6	1.732*	24	3.702	42	2.827	60	3.738
7	2.162	25	1.825*	43	4.831	61	5.592
8	2.983	26	2.001	44	1.510*	62	3.652
9	4.341	27	5.242	45	2.951	63	2.792
10	2.317	28	1.459*	46	4.906	64	2.094
11	4.696	29	4.736	47	2.385	65	4.862
12	3.262	30	3.452	48	2.381	66	3.997
13	2.444	31	1.484*	49	3.516	67	5.231
14	2.276	32	3.015	50	1.438*	68	1.516*
15	3.647	33	4.494	51	3.612	69	4.655
16	2.216	34	1.821*	52	3.934	70	2.227
17	2.381	35	4.306	53	3.528		
18	3.516	36	5.407	54	2.402		

* Weak discrimination item. Critical T Value at a degree of freedom=168 and significant level at (0.05) = 1.98

Table 2: Representing the correlation coefficients of items counseling needs with the overall result of the total degrees of the scale

Items number	Correlation coefficient	Items number	Correlation coefficient	Items number	Correlation coefficient
1	0.415	25		49	0.411
2	0.324	26	0.444	50	
3		27	0.425	51	0.425
4	0.384	28		52	0.371
5		29	0.250	53	0.355
6		30	0.384	54	0.345
7	0.243	31		55	
8	0.332	32	0.356	56	
9	0.373	33	0.384	57	
10	0.359	34		58	0.405
11	0.401	35	0.428	59	0.374
12	0.412	36	0.374	60	0.405
13	0.419	37	0.380	61	0.382
14	0.394	38	0.372	62	0.398
15	0.414	39	0.320	63	0.437
16	0.388	40	0.351	64	0.361
17	0.337	41	0.339	65	0.355
18	0.411	42	0.378	66	0.342
19	0.378	43	0.374	67	0.337
20	0.281	44		68	
21	0.392	45	0.379	69	0.311
22	0.332	46	0.417	70	0.225
23	0.323	47	0.334		
24	0.355	48	0.364		

average vary between (2.33 - 1.22) for the 12 items in the school field. Compared to the standard that has been established = 2, we have found 09 needs whose weighted average exceeds the degrees average scale. Item number 03 (I have great difficulty in assimilating theoretical subjects) is ranked first. Item number 07 (I have difficulties to show my skill is ninth). While items 04, 05, 08 are below standard = 2 and are not a problem for students of the Mostaganem Institute of Physical Education.

2- Psychological field Results: the table shows that the weighted average is between (2.52 - 1.47) for the 11 items of the psychological field. Compared with the standard that has been established = 2, we have found 8 needs whose weighted average exceeds the degrees average scale. Item number 11 (I suffer from the pressure of others) is ranked first. The item number four (I feel disturbed by my shyness) is eighth., While items 05, 07, 10 are below standard = 2, and are not a problem for students of the Mostaganem Institute of Physical Education.

3- Social field Results: the table shows that the weighted average is between (2.59 - 1.39) for the 11 items of the social field. Compared with the standard that has been established = 2, we have found 6 needs whose weighted average exceeds the degrees average scale. Item number 9 (I have little respect for the customs and traditions of society) is ranked first. Item number 6 (I am disturbed by the criticism of others) is sixth, while items 2, 3, 5, 7, 11 are below standard = 2 and are not a problem for students of the Mostaganem Institute of Physical Education.

4- Sexual field Results: the table shows that the weighted average is between (2.47 - 1.20) for the 7 items of the sexual field. Compared with the standard that has been established = 2, we have found 7 needs whose weighted average exceeds the degrees average scale. Item number 3 (I feel preoccupied by the idea of marriage) is ranked first. Item number 6 (I am embarrassed by the lack of sex education) is fifth, while items 2, 1, are below standard = 2 and are not a

problem for students of the Mostaganem Institute of Physical Education.

5- Economic field Results: the table shows that the weighted average is between (2.22 - 1.61) for the 5 items of the economic field. Compared with the standard= 2 that has been established, we have found 4 needs whose weighted average exceeds the degrees average scale. Item number 2 (I suffer from a lack of spending money for my needs) is ranked first. Item number 4 (I suffer because I do not have proper clothes) is fourth, while item 5 are below standard= 2 and are not a problem for students of the Mostaganem Institute of Physical Education.

6- Health field Results: the table shows that the weighted average is between (2.71 - 1.29) for the 7 items of the health field. Compared with the standard that has been established=2, we have found 4 needs whose weighted average exceeds the degrees average scale. Item number 6(I complain about the lack of health care) is ranked first. Item number 7(I complain about frequent sports injuries) is fourth, while items 1, 4, 5, are below standard= 2 and are not a problem for students of the Mostaganem Institute of Physical Education.

7- Religious field Results: the table shows that the weighted average is between (2.22 - 1.61) for the 4 items of the religious field. Compared with the standard that has been established=2, we have found 2 needs whose weighted average exceeds the degrees average scale. Item number 1 (I feel that I do not fulfill my

religious duties) is ranked first. Item number 3(I find it difficult to fulfill my religious duties) is second, while items 2, 4, are below standard= 2 and are not a problem for students of the Mostaganem Institute of Physical Education.

DISCUSSING RESULTS

The tables (3,4,5,6,7,8,9) show that there are (38) counseling needs which require to be satisfied by the students of the institute of Physical Education, University of Mostaganem in the educational, psychological, social,sexual, health, economic and religious fields.

Counseling needs for physical education students in the field of education are due to a lack of resources. They also need counseling in the psychological field because they are subject to external pressure and lack of Psychological burden.

Lack of aptitude, competence, cooperation, tolerance of students to establish good relations with others, and to participate in social activities are real indicators of their needs in counseling in the social field.

The need for counseling in the fields of health and sexuality can be explained by the absence of institutions involved in raising awareness of health and sexuality.

The counseling needs of students in the economic field are firstly due to the low standard of living of the family and secondly to the prices which are constantly rising.

Table 3: Counseling needs of students in the field of education

Items number	Items	Weighted average	Items ranking
1	I feel disorganized because of the irregularity of the courses	2.24	5
2	I cannot concentrate during classes	2.31	2
3	I have great difficulty in assimilating theoretical subjects	2.33	1
4	I am slow in learning motor	1.22	12
5	Teachers do not help me improve my physical abilities	1.57	11
6	I suffer from the lack of sports equipment at the institute	2.19	7
7	I have difficulties to show my skills	2.05	9
8	I have no motivation to learn and realize	1.91	10
9	I complain about the lack of suitable sports grounds	2.23	6
10	I complain about the bad behavior of students in class	2.13	8
11	I complain about the use of notes by teachers as a means of pressure	2.26	4
21	I cannot express my opinion to teachers	2.30	3

Table 4: Students counseling needs in psychological field

Items number	Items	Weighted average	Items ranking
1	I am afraid of situations deemed normal by my fellow student	2.37	4
2	I worry about the things I feel and do not deserve this concern	2.18	5
3	I feel I get angry quickly	2.39	3
4	I feel disturbed by my shyness	2.03	8
5	I express my joy in a way that others might reject	1.94	9
6	I despair if I do not achieve my goals	2.14	6
7	I imagine achieving my goals when I cannot reach them	1.47	11
8	suffer from the lack of concentration and misguidance	2.09	7
9	I have difficulty controlling my emotions	2.43	2
10	I hesitate to discuss many topics with others	1.69	10
11	I suffer from the pressure of others	2.52	1

Table 5: Student counseling needs in the social field

Items number	Items	Weighted average	Items ranking
1	I find it difficult to integrate with others people	2.51	2
2	I feel hurt because I do not find a friend that suits me	1.39	11
3	I am not well regarded by others people	1.66	7
4	I am not tolerant with others people	2.46	3
5	I do not interfere in the private affairs of others people	1.56	9
6	I am disturbed by the criticism of others people	2.27	6
7	I offer little help to people who need help	1.42	10
8	I realize my desires without taking into account the desires of other people	2.29	5
9	I have little respect for the customs and traditions of society	2.59	1
10	I do not respect the laws if they are against what I want to do	2.38	4
11	I love solitude and do not like to frequent other people	1.59	8

Table 6: Student counseling needs in the sexual field

Items number	Items	Weighted average	Items ranking
1	I do not want to establish a friendship relationship with the opposite sex	1.82	6
2	I do not like that some students contradict other students girls	1.20	7
3	I feel preoccupied by the idea of marriage	2.47	1
4	I am embarrassed when I speak with girls students	2.13	4
5	I am ashamed when the question is about sexuality	2.19	3
6	I am embarrassed by the lack of sex education	2.12	5
7	I suffer from the practice of certain non-conforming sexual habits	2.34	2

The feelings of guilt of the students resulting from a breach of their religious duties show their needs in counseling in the religious field.

CONCLUSIONS

- There are thirty eight counseling needs that must be satisfied by the students of the institute of Physical Education, University of Mostaganem.
- Nine counseling needs have emerged in the field of education, which relate to the student's relationship with teachers, problems related to their studies, examinations, problems with teaching activities and vocabulary problems.
- In the psychological field, eight counseling needs have appeared. They revolve around feelings of guilt, their weakness in controlling their emotions, as well as their shyness and fear of meeting others.

Table 7: Student counseling needs in the economic field

Items number	Items	Weighted average	Items ranking
1	I am suffering from the poor financial situation of my family	2.14	2
2	I suffer from a lack of spending money for my needs	2.22	1
3	I feel the need to work to earn my pocket money	2.09	3
4	I suffer because I do not have proper clothes	2.00	4
5	I feel embarrassed by the existence of material differences between me and my colleagues	1.61	5

Table 8: Student counseling needs in the health field

Items number	Item	Weighted average	Items ranking
1	I am suffering from anemia	1.93	5
2	I feel apathetic, lazy, and dizzy	2.11	3
3	I suffer from a lack of appetite	2.29	2
4	I suffer from a lack of appetite	1.56	6
5	I have respiratory problems	1.29	7
6	I complain about the lack of health care	2.71	1
7	I complain about frequent sports injuries	2.06	4

Table 9: Student counseling needs in the religious field

Items number	Items	Weighted average	Items ranking
1	I feel that I do not fulfill my religious duties	2.22	2
2	I cannot find people who guide me in matters of religion	1.27	3
3	I find it difficult to fulfill my religious duties	2.12	1
4	I am struggling because of the rigidity of some religious teachers	1.10	4

- Six counseling needs have emerged in the social field. They relate to their relationships with other students, their ability to help each other and to seek advice from others.
- Five counseling needs have arisen in the sexual field. They concern sexual sensitization.
- Four counseling needs appear in the economic

field. They are related to the standard of living of the students.

- Four counseling needs have emerged in the health field related to health care, sports injuries, laziness, lethargy and lack of appetite.
- Two counseling needs have arisen in the religious field and concern the religious duties of the students.

Recommendations

- Develop and construct a counseling program at the Institute of Physical Education on a scientific basis arising from the real needs of the students.
- Propose to the Ministry of Higher Education to create a counseling unit to solve problems affecting students in physical education.
- Sensitizing researchers to make detailed and in-depth studies on the counseling needs of students in important fields that this study has shown.

REFERENCES

- LABIDI Souhila, (1987). Counseling needs of vocational schools from the perspective of students and administrative workers. Magister Thesis. Faculty of education. Cairo university. 187.
- DONAHUE R.W. (1982). Counseling Need of Adult Black students in urbancom unity colleges, university of Florida Dissertation Abstracts international vol, 43. No. 6 December. 125.
- ZAHARAN Abdessalem Hamed (1982). Psychological guidance and counseling. T 2. Cairo. The world of books. 26.
- DHARI Missoun Karim (2002). School performance and its relationship to the behavior of isolation and counseling needs of students in reputed schools. Master Thesis, Faculty of Education of the University of Baghdad. 45.
- TOUK, Mahieddine and ADESS Abderrahman (1984). Basic notions of psychology of education. The editions joun. Jordan. 151.
- ABU ATIYA Sihem Derwiche.(1988). Principles of psychological counseling. T1. The house of the pen. Koweit. 29.
- JOURARAD Sidney M. (1974). Healthy personality. Macmillian publishing company, Inc. New York, p 07.
- SELTZ Dwain (1983). Theories of personality. 234.
- EZZEBADI Ahmed Mohamed, and ALKHATTIB Hichem (2001). Principles of psychological guidance and counseling. International scientific publishing house. Amman. 44.

The Effect of Coordination Training in Developing Some of the Skills of Women Handball Players in Sweden

Ali Faleh Salman

Ph.D in Sport Medicine and Director and Founder of the Global Council of Sport Science in Sweden

ABSTRACT

The all activities of sports in general depend on the skills of athlete's, but the skills in the interest of the team, the more team qualified in terms of skill whenever his chances of achieving positive results. The motor skills, which overlooked the trainers, are significantly related to capacities that have significant impact in the sense of maturity and consistency in neuromuscular work. We see that the harmonic capacity and their training did not take its share impact in training curricula in handball. Indeed, the importance of research in the study of the effect of exercise capacity skills of players handball and their impact on the development of skills development universe capacity one the chief in building motor skills and cannot be ignored when preparing the training programs of it increases the experience of player's and expected their perceptions of the response variables of the many at the time of the match. Thereby, we will work in our research to include a training program for the team NKIK girls born in 1997 for the training capabilities of the harmonic and to know the impact of level of development on skills development for the hand and to compared with the RP team players, who continued their training in accordance with the traditional training program. However, the aim our research was to identify the effect of exercise capacity in harmonic development of some of the basic skills in handball. We hypotheses if states that there is a significant difference in the morale of some basic skills in handball under study at the experimental group between pre and post tests and in favor of the post test. We studied also the significant differences in the morale of some basic skills in handball under study in a posteriori tests between the experimental and the control groups and in favor of the experimental group. The results analyzed and discussed by our researchers were able to reach a consensus that the training capacity has a positive impact in the development of some motor skills essential for handball practice. However the existence of significant differences between the results of the post tests for the control and experimental groups. The added rate of evolution taking place for members of the research sample in tests of skill between the pre and post tests in favor of the experimental group that was trained on the interoperability capacity.

Keywords: Coordination, skills, handball, developing

INTRODUCTION

The dilemma of training, which the owners of competence in researched, studied to find appropriate

solutions; however we coaches face many problem training trying to decipher to develop and raise the level of achievement and achieve the goal of tournaments (12).

Thus, today we see that the athletic training has become not only focusing on loads of high physical performance or maximum load or near- maximum to develop the capacity of physical and tactical skill, but to sporting achievement in this day requires harnessing the efforts on the vocabulary of motor skills that must be met and take care and work on it accurately to achieve our ultimate desired goal of strategic planning,

Access this article online



Website:
<http://sjsr.se/>

ISSN:
2001-9211

Address for correspondence:

Ali Faleh, Ph.D in Sport Medicine and Director and founder of the Global Council of Sport Science in Sweden.
E-mail: dr.alifaleh@gcss.se

a better access to high achievement at the international level in the global (4.21).

The all activities of sports in general depend on the skills of athlete's, but the skills in the interest of the team, the more team qualified in terms of skill whenever his chances of achieving positive results (9), since the skills of the difference derived from the individual skills score of the members of team, that's the basic building level of team depends on the performance of players (11.18).

The motor skills, which overlooked the trainers, are significantly related to capacities that have significant impact in the sense of maturity and consistency in neuromuscular work. We see that the harmonic capacity and their training did not take its share impact in training curricula in handball (13).

Indeed, the importance of research in the study of the effect of exercise capacity skills of players handball and their impact on the development of skills development universe capacity one the chief in building motor skills and cannot be ignored when preparing the training programs of *Vdilaaly* it increases the experience of player's and expected their perceptions of the response variables of the many at the time of the match (10).

Thereby, we will work in our research to include a training program for the team NKIK girls born in 1997 for the training capabilities of the harmonic and to know the impact of level of development on skills development for the hand and to compared with the RP team players, who continued their training in accordance with the traditional training program.

However, the aim our research was to identify the effect of exercise capacity in harmonic development of some of the basic skills in handball. We hypotheses if states that there is a significant difference in the morale of some basic skills in handball under study at the experimental group between pre and post tests and in favor of the post test. We studied also the significant differences in the morale of some basic skills in handball under study in a posteriori tests between the experimental and the control groups and in favor of the experimental group.

THE RESEARCH SAMPLE

In our research consisted of 30 players of the players Club (NKIK) and Club (RP) for handball was born in 1997 and by 15 players from each club, and the

way the sample was selected purposively to the fact that the two teams close to the level and the order in the list of the league. To know the specificity of the sample in terms of good and selected over the allocation of second nature to the two sets of research, the researcher calculates the *coefficient of torsion* to measure the weight and height of the statement *Tjanassehma*, as shown in Table 1.

To learn equal groups in terms of variables skills and the lack of any bias in the selection of members of both groups the researcher used the t-test for independent samples to know the significance of differences between the two groups, and this is him (Table 2) where the significance of differences for all tests at random and this shows equal the two groups and no difference between its members.

PROCEDURES SEARCH FIELD

Tests were conducted to tribal member's research sample of work by a team of 16-17/4/2013 days, where they were testing the experimental group Club (NKIK) on the first day and at the Hall (SPORT HALLEN) at six o'clock in the evening. On the second day of the control group were tested Club (RP) and the main hall of the club at six o'clock in the evening.

HOW TO IMPLEMENT THE EXPERIMENT

After performing tests on two groups of tribal research, we were made after the implementation of the experiment during times weekly training modules for each club by three training sessions per week for ten weeks. The training capacity has been used by the harmonic experimental group Club (NKIK) by the first 30 minutes of time each module, where it is applied exercises synergy diverse and different in this time period. The control group Club (RP) made implementation of the traditional training method for the same time period by three training sessions per week as well. After completion of the

Table 1: Shows the values of mean, median, standard deviation and coefficient of torsion of the sample to the variables height and weight

Variables	Arithmetic mean	Median	Standard deviation	Coefficient sprains
Length	168	170	3.74	1.6
Weight	56.83	58	2.47	1.42

Table 2: Shows the values of circles and standard deviations and the significance of the differences in the tests of tribal groups (control and experimental)

Statistical parameters tests	The control group		The experimental group		Value of t- test		Significance of differences
	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation	Counted	Charted	
Consensus movement and scrolling reception	20.3	3.9	19.6	4.1	0.48	2.04	Random
Own speed	30.46	3.09	29.37	3.18	0.96		Random
Overall running	29.08	4.8	28.34	5.2	0.41		Random
Shooting's accuracy and strength	2.1	4.28	2.7	4.35	0.38		Random

training program conducted researcher posteriori tests of a sample of research and testing in the same style tribal.

RESULTS

Showing the Results of Tests of the Experimental Group and Analyzed

The results show the test of average differences between the two tests (4.26) and standard error (0.38) and the sum of squares of the differences (82), and after using the t-test for differences between pre and post tests amounted to (v) calculated (43.38), the largest of the tabular value of (1.76) below the level of error (0.05) and the degree of freedom (14), however this confirms the existence of significant differences between high pre and post tests and in favor of the post test.

About the test (own speed), the results show that the average differences between the two tests (5.94) and standard error (1.52) and the sum of squares of the differences (264.20), and after using the t-test for the difference between the pre and post tests amounted to (v) calculated (15.12), which is greater than the tabular value of (1.76) below the level of error (0.05) and the degree of freedom (14) and this confirms the existence of significant differences between high pre and post tests and in favor of the post test.

Concertinaing the test (running mass), the results show that the average differences between the two tests (6.78) and standard error (1.33) and the sum of squares of the differences (248.48), and after using the t- test for the difference between the pre and post tests amounted to (v) calculated (19.74), which is greater than the tabular value of (1.76). Below the level of error (0.05) and the degree of freedom (14) and this confirms the existence of significant differences between high pre and post tests and in favor of the post test.

Perhaps the test (power correction and accuracy), the results show that the average differences between the two tests (2.93) and standard error (0.42) and the sum of squares of the differences (54), and after using the t-test for the difference between the pre and post tests amounted to (v) calculated (26.99), the largest of the tabular value of (1.76) below the level of error (0.05) and the degree of freedom (14) and this confirms the existence of significant differences between high pre and post tests and in favor of the post test.

SHOWING THE RESULTS OF TESTS OF THE CONTROL GROUP AND ANALYZED

The results show the test (consensus motion scrolling and reception) that the average differences between the two tests (1.53) and standard error (4.69) and the sum of squares of the differences (34), and after using the t- test for differences between pre and post tests amounted to (v) calculated (1.26) which is smaller than the tabular value of \$ (1.76) below the level of error (0.05) and the degree of freedom (14), and this explains the presence of random differences between pre and post tests.

The test (own speed), the results show that the average differences between the both tests (1.83) and standard error (3.17) and the sum of squares of the differences (66.24), and after using the t-test for the difference between the pre and post tests amounted to (v) calculated (2.23), which is greater than the tabular value of \$ (1.76) below the level of error (0.05) and the degree of freedom (14) and this confirms the existence of a few significant differences between pre and post tests and in favor of the post test.

The test (running mass), the results show that the average differences between the two tests (2.38) and standard error (3.25) and the sum of squares of the

differences (62.18), and after using the t-test for the difference between the pre and post tests amounted to (v) calculated (2.83), the biggest of the tabular value of (1.76) below the level of error (0.05) and the degree of freedom (14) and this confirms the existence of a limited significant differences between pre and post tests and in favor of the post test.

The test (power correction and accuracy), the results show that the average differences between the two tests (0.56) and standard error (3.08) and the sum of squares of the differences (28), and after using the t-test for the difference between the pre and post tests amounted to (v) calculated (0.70) which is smaller than the tabular value of (1.76) below the level of error (0.05) and the degree of freedom (14) this shows the presence of random differences between pre and post tests.

SHOWING THE RESULTS OF POST-TESTS FOR THE CONTROL AND EXPERIMENTAL GROUPS

Table 5 displays the results of the statistical tests of skills to members of the research sample for the control and experimental groups in the post-test. The results of the consensus of receiving and passing movement test for the control group shows that the arithmetic means reached (20.4) with a standard deviation (1.05). while, for the experimental group, the results show that the arithmetic mean was (24.2) with a standard deviation (0.39) and after the use of test (T) for independent samples, the value of the calculated (T) amounted (13.57) which is greater than the tabular value which reached (2.04) and under the error level (0.05) and freedom degree (29). This confirms the existence of

Table 3: The results of the statistical treatment of the sample tests (experimental group) between the post-test and pre-test

Statistical parameters tests	The experimental group			Value of t- test		Significance of differences
	Average differences	Standard differences	Square differences	Counted	Charted	
Consensus movement and scrolling reception	4.26	0.38	82	43.38	1.76	Significant
Own speed	5.94	1.52	264.20	15.21		Significant
Overall running	6.78	1.33	248.48	19.74		Significant
Shooting's accuracy and strength	2.93	0.42	54	26.99		Significant

Table 4: The results of the statistical treatment of the sample tests (experimental group) between the post-test and pre-test

Statistical parameters tests	The experimental group			Value of t- test		Significance of differences
	Average differences	Standard differences	Square differences	Counted	Charted	
Consensus movement and scrolling reception	1.53	4.69	34	1.26	1.76	Random
Own speed	1.83	3.17	66.24	2.23		Significant
Overall running	2.38	3.25	62.18	2.83		Significant
Shooting's accuracy and strength	0.56	3.08	28	0.70		Random

Table 5: Shows the values of the arithmetic means, the standard deviation and the significance of differences in the post tests of the control and experimental groups

Statistical parameters tests	The control group		The experimental group		Value of t- test		Significance of differences
	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation	Counted	Charted	
Consensus of receiving and passing movement	20.4	1.05	24.2	0.39	13.57	2.04	Significant
Own speed	28.05	1.94	23.48	1.59	7.61		Significant
Overall running	27.76	1.89	22.98	0.87	9.96		Significant
Shooting's accuracy and strength	2.12	1.12	4.51	0.96	6.45		Significant

significance differences between the two groups in favor of the group experimental.

As for the speed test results showed that the control group reached the arithmetic mean of (28.05) with a standard deviation equal (1.94), while the experimental group, the results show that the arithmetic mean was (23.48) with a standard deviation (1.59), and after the use of (t)-test for independent samples amounted to (v) the calculated (7.61), the largest of the tabular value of (2.04) below the level of error (0.05) and the degree of freedom (28), and this confirms the existence of significant differences between the two groups in favor of the experimental group.

As for the overall running test, the result of the control group showed that the arithmetic mean reached (27.76) with a standard deviation (1.89) while for the experimental group, the results show that the arithmetic mean reached (22.98) with a standard deviation (0.87). And after using the (T) test for independent samples, the calculated (T) amounted to (9.96), which is greater than the tabular value of (2.04) and under the error level of (0.05) and the freedom level degree of (28) and this confirms the existence of significant differences between the two groups in favor of the experimental group.

Either test of strength and accuracy of the correction has been shown that the results of the control group reached the arithmetic mean (2.12) with a standard deviation (1.12), while the experimental group, the results show that the arithmetic mean was (4.51) with a standard deviation (0.96), after using t-test for independent samples amounted to (v) the calculated (6.45), the largest of the tabular value of (2.04) below the level of error (0.05) and the degree of freedom (28), and this confirms the existence of significant differences between the two groups in favor of the experimental group.

DISCUSSION

Our results showed in through tables presented (6,5,3) of all tests for each consensus motion scrolling, reception and own speed, and running mass and the strength of the correction and accuracy, indeed showed tighter; the experimental group and there are significant differences between the two tests pre and post test and for the post-test as well as the existence of significant differences in test posttest between the control and experimental groups and in favor of the experimental group, also he found the development taking place in

the experimental group is better than the control group, the researchers attribute the reason to the impact of exercise on the development of the harmonic capacity building basic skills in handball, as follows:

The evolution achievement in compatibility testing movement scrolling and reception in order to contain the training program for the experimental group on the training capacity harmonic that develop the speed of movement of the arms, where the exercises speed of response and connectivity locomotors movements within the rhythm of specified will lead to developed speed motor for the body and show through transmission of the body as a whole or in movements of upper limbs or lower) (1,12,17,24).

The speed test own Vengda has involved significantly and that the large number of exercises harmonic diverse, which included training curriculum for the experimental group (2,7,19), we find that the exercises running between the barriers and inhibitions different direction and height works to improve mobility vehicle with the implementation of additional duties (14 0.22), where he works on the nervous system to give orders quick and enforceable in different directions at the same time (11,15,20,23).

The word fidelity means the ability to direct movements Urdu by the individual toward a particular goal (8.16), and this requires high efficiency in the muscular and nervous system. Vadakkh require full control of voluntary muscles and directed towards a particular goal (2, 6, 13), also requires that it be contained nerve signals to the muscles of the nervous system Court directive (9, 16, 21, 23).

CONCLUSION

The results analyzed and discussed by our researchers were able to reach a consensus that the training capacity has a positive impact in the development of some motor skills essential for handball practice. However the existence of significant differences between the results of the post tests for the control and experimental groups. The added rate of evolution taking place for members of the research sample in tests of skill between the pre and post tests in favor of the experimental group that was trained on the interoperability capacity.

Therefore, we also recommend the introduce of training capacity and harmonic vocabulary prominently

within the training curriculum for handball teams, especially the teams younger age groups, because it is from the early kinetic qualities that contribute to the development of the nervous system of future children.

REFERENCES

- Ahmed Orabi, planning training in handball, i 1, Baghdad, Office Alvarzh. 2002. P 107.
- Ahmed Orabi, the basic elements of handball, Baghdad, Dar es Salaam office. 2004. P. 181.
- Ali Faleh, Guide Leader, Baghdad, Office of Innovation.2006. P.79.
- Bach M. (2007). The Freiburg Visual Acuity Test – variability unchanged by post-hoc re-analysis. *Graefes Arch. Clin. Exp. Ophthalmol.* 245, 965–971.
- Bruce J. Noble, *Physiology of Exercise and Sport Times Mirror*, Mosby College Publishers, U.S.A., 1996, P156.
- C. Giorgetti and others, *Sport cardiology, Relationship between cardiorespiratory function and Vo2 Max in Athletes*, Auto Gaggi publisher, printed in Italy, 2000, P90.
- Dietrich Harre, *Trainingslehre*, Sportverlag, Berlin 1971. P.97.
- Exkert Hellen, *practical Measurement of physical performance*, philddelea and febiger, 1984. P.152.
- Iman, Ranald. L. and W.H.coner, *Amodern Approaen to statises*, johanwiely, 1983. P.202.
- Houri Uglah Solomon and Khaled Abdel Majeed, *relationship focus attention precisely flinging machine gun 7.62 mm*, *Journal Mesopotamia of the sport science*, University of Mosul, Volume 6, Issue 20. 2000.
- Jean Marie Stine, *Duble Your Brai Power*, 1997. P.74.
- Julie N. Bernier, 2David H. Perrin. *Effect of Coordination Training on Proprioception of the Functionally Unstable Ankle* *J Orthop Sports Phys Ther.* 1998;27(4):264-275
- Karpovtch (P),Sinning (W.E), *Physiologie de Lactivite´ musculaire*, Paris, Vigot, 1983. P.167.
- Kuchenbecker, B., *Hand Ball, Abwehrsysteme*, Trainerbibliothek, Bd.11. Berlin, Munchen, Frankfurt a.M., 1974. P.93.
- Lasker AG, Zee DS, Hain TC, Folstein SE, Singer HS. *Saccades in Huntington's disease: initiation defects and distractibility.* *Neurology.* 1987;37:364–70.
- Michel pradet, *LA pre´paration physique*, paris, Insep, 2002. P.143.
- Mohamed Sobhi Abu Saleh, *statistical methods*, i 1, Oman, Dar Yazori for publication and distribution of 0.2000.
- Mounir Gerges, *handball of all*, i 1, Oman, the House of Culture of the printing and distribution. 1985. P 83.
- Muller & other, *Hand Ball Spielend Trainiern*, Berlin, Sport Verlag, 1992. P.130.
- Naseer purity and Ghazi Abdul-Wahab, *mental processes*, Baghdad, b. M. 2006.
- Stein & Federhoff, *Hand Ball*, Berlin, Sportverlag, 1977. P.66.
- Tamas Ajan, Lazar Baroga, *weight lifting fitness for all sports international weightlifting federation szechengi printing House Hungary*, 1988, p176.
- Tony bozan, *USE your Memory*, BBC Books Woodland, 80 Wood, London w120 ott, 1992. P.109.
- Zeier,V., *Schulung der Abwehrtechnik, Beitrage zur trainings, und wett kampfentwicklung im hallen hand ball*, Bd.12,Sarbrucken, 1981. P.94.

The Effect of Physical Activity Programs to Improve Walking and Balance to Prevent Falls in Elderly People

Esselma Nouria, Bessikadour Habib

Institute of Physical Education and Sports, University of Abdelhamid Ibn Badis -Mostaganem-Algeria

ABSTRACT

Many researchers define old age as a decline in functional and psychomotor abilities, which is the most exposed to age-related illnesses and therefore more to fatigue and overwork after the least effort. That is why we conducted this study in order to assist this category of population so that they can preserve or reacquire certain motor skills that can help them carry out their daily activities and be autonomous without the need for assistance. Thus, we have proposed a training program adapted to improve walking and balance, as they are two essential elements to autonomy, and to lead an active daily life. We have assumed that the proposed program will have a positive impact on walking improvement and balance in elderly people. After a prospective study, And selected a sample that includes elderly institutionalized people in the elderly institution of the wilaya of Mostaganem. Due to the nature of this study and the method used (experimental method) in a premeditated manner. The group was divided into two parts, an experimental group and a control group. Composed of 40 elderly people. We performed two tests (test and retest), the period of application of the proposed program is estimated of three months. After receiving test and retest results, we performed a statistical study Using the mean and standard deviation (SD), and after a comparative study of the two samples, we found significant differences in the retest for the test sample. We then deduced that the training program had a positive impact on balance and walking compared with the control sample.

Keywords: Elderly, physical training, training program, balance, walk, preventing falls

INTRODUCTION

For the elderly, in normal aging, it is noticed a gradual upheaval of all psychomotor functions. Advancing age brings many normal health problems that are related to aging (Paterson, 2007). Aging affects the sensory and somatosensory systems and disrupt the regulatory capacity of the postural system (sychamwy, 1986). During the aging process, the physiological functions

tend to decline over time. According to some observations, this process tends to accelerate more from the age of 60 (Brown, Sinacore & Binder, 2000). Age is associated with the decline of sensory functions and muscular strength of the lower limbs, the walking pattern changes with age and can be associated with postural instability and falls (Sudarsky, 1990).

The characteristics of gait will change with age under the combined effect of physiological and pathological aging. These amendments mainly involve an irregular step, reducing the length of the stride, instability and decreased walking speed) Blanke, 1989; Coste-Salon & al, 1989; Elble, 2001; Murray, Kory & Clarkson, 1969; Serratrice & Daumen-Legre, 1994). They partly explain the high prevalence of geriatric fall that reached 50 % of subjects over 65 years ans (World Health

Access this article online



Website:
<http://sjsr.se/>

ISSN:
2001-9211

Address for correspondence:

Esselma Nouria, Institute of Physical Education and Sports, university of Abdelhamid Ibn Badis -Mostaganem-Algeria.
E-mail: noria-esselma@hotmail.fr

Organization (WHO), 1989; Prudham& Evans, 1981). Several prospective studies have found that instability Postural had a strong predictive value with respect to the risk of falling, in the community and in institutions (Campbell, Borrie & Spears,1989; Nevitt, Cummings, Kidd & Black, 1989); (O'Loughlin& al, 1983; Tinetti ME, 1988; Tinetti ME, 1986).

The well-being and quality of life are the primary concerns for the elderly. In general, the quality of life depends on the autonomy and functional capacity.il is important to promote these two elements to ensure a good quality of life (Keller & Fleury, 2000). Power is important for the maintenance of functional capacity since it is an important feature for walking up and down stairs as well as in the prevention of falls (Petrella, Miller & Cress, 2004).

Functional capacity is generally associated with lower limbs. The strength, power and muscular endurance of the lower limbs has a direct influence on the independence of the elderly. Ensuring a better response of the lower limbs; Coordination and balance also improved. Walking is a great way to counter the negative effects of aging by ensuring autonomy and independence (bélande, 2007).

Walking is often associated with since independence in itself guarantee the possibility of movement, locomotion and ensuring greater possibility of physical activity. In terms of function, walking provides a level of independence (Simonsick, Guralnik, Volpato, Balfour, & Fried, 2005; Lusardi, Pellecchia, & Schulman, 2003).

Coordination and balance also improved. Walking is a great way to counter the negative effects of aging by ensuring autonomy and independence (Béland, 2007)

The static balance and dynamic balance are essential for success, without stumbling or losing balance, daily activities such as stand up, walk, get up from a chair, up or down the stairs(Paterson, 2007). Several evaluate aging balance functions and mobility by increasing the number of ground waste (Gillespie & al, 2003); (Jessup, Horne, Vishen & Wheeler, 2003); (Mahoney & al, 2007).

Physical activity offers a major opportunity to increase the duration of active and independent lives, and reduce functional limitations (Cress & al, 2004).

The objective of this study was to define the influence of a suitable physical training on improving the walking and balance in the elderly. The main hypothesis of this study was that physical activity program adapted to a positive effect on improving the walking and balance of elderly people.

MATERIALS AND METHODS

Population

40 subjects participated in this study which. Twenty women with an average age (69.25) and twenty men with an average age of 73.95 years. each group is divided into two parts an experimental group and a control group. People who had an age greater than 60 years and had the opportunity to participate in this 12-week training cycle in two weekly 60-minute sessions were included in this study. Criteria for non- inclusion concerned the presence of respiratory diseases cardiovascular, neurological and medically evaluated and rheumatoid justifying a cons -indication to physical activity.

From Table 1, which is the main pillar of our study, in remarks The presence of a large dispersion in the age of the experimental group ($6.18 \pm$) compared to the control group ($3.31 \pm$). This is due to the age difference in elderly men, This does not affect our study because both groups are in old age. As for women's groups, there are no large dispersion between the two groups. Regarding the weight, height, there is no significant difference between the sexes and between the two groups, which facilitates the work of researchers. How researchers use the body mass index, we want to determine which of the ideal weight for the research sample, which researchers believe is important in determining the process of walking and balance. where the increase in underweight only affects the elderly. It was shown from the weight indicator of the study

Table 1: Characteristics of speech subjects and elderly witnesses

Group	Men				Women			
	Control		Experimental		Control		Experimental	
	X1	Y1	X1	Y2	X1	Y1	X2	Y2
Aged	69.1	3.31	71.5	6.18	71.3	4.02	69.2	3.93
Weight	76.3	6.498	73.7	4.34	68.4	3.27	75.7	6.34
Height	1.66	0.049	1.66	0.029	1.56	0.085	1.57	0.072
IMC	27.7		26.8		28.15		30.77	

sample of men and women increased weight, which means that there is an increase in body fat. This is due to physiological changes that occur with age and thus affecting the external changes.

By stella and Jacques “ Older people will have difficulty in moving, to maintain good posture as well as to preserve its balance. Several phenomena occur including loss of muscle mass by 30 to 50% degeneration of cartilage and loss of elasticity of the ligaments and tendons (stella & Jacques, 2000).

Methods

The progress of the physical activity program

Subjects were assessed two days before the training period and after the end of the training period. Intervention group participants were involved in a physical activity program developed by physiotherapists and rehabilitation physician. This program lasting 12 sessions with two weekly sessions of 60 minutes. Was centered on the balance training with strengthening exercises, mobilization floor (Belhassen, 199a). learning techniques to raise the ground; coordinating work and exercises eyes closed (Belhassen, 1999b). The assessment tests are performed during the first and the last session of the cycle. A session consists of six 10-minute segments.

- 10 minutes of contact, verbalization and warm; to seek joint mobility, tone muscle and heart rate.
- 4 * 10 minutes of programmed activities based on initial assessments.
- 10 minute cool-down and verbalization. For patients control group, they have been a simple oversight and continued their life habits

Tests

All subjects performed all tests before and after the training period in order.

Test timed up and go

The test originally named Get Up and Go (Mathias & al, 1986), became the Timed Up and Go since the publication of the Podsiadlo having validated with a time score (Podsiadlo & Richardson, 1991).

This is the simplest test in consultation and probably the most reliable. a subject sitting on a chair must stand, walk 3 meters in front of him, back to the chair and sit. The score is given by the time in seconds and it certainly benefits from this test to perform clinical analysis developed at the beginning of this article.

Timed Up and Go is reproducible over time and between observers and the results are correlated with those of BBS. (Yelnik, 2007-2008).

Test walking speed F8W

The F8W requires a person to walk a figure-of-8 around 2 cones placed 5 ft (1 ft=0.3048 m) apart. A figure-of-8 was chosen because:

- (1) The task is readily recognized by name alone;
- (2) The pattern consists of walking on curved paths, clockwise and counterclockwise, with straight-path walking between the curved paths;
- (3) Alternation between straight and curved paths requires switching motor strategies, including biomechanical and movement control adjustments;
- (4) Motor planning is needed to navigate the straight and curved paths.

Designed to be a measure of walking skill, we based scoring for the F8W on 3 components of skilled movemen (Brooks. V.B, 1986): (1) speed (time for completion), 2) amplitude (number of steps taken), and 3) accuracy (a tight versus an overly wide curved path). The accuracy component was defined as follows: F8W completed within a 2-ft surround of the cones (yes or no).

Test Tinetti

(Tinetti ME, et al 1994) is certainly the most classic test in gerontology. It has two parts. The first part is a static study with 13 items, all close to those realized during a current physical examination, examination standing, ability to stand and intrinsic imbalance. Each item is rated from 1 (normal) to 3 (abnormal). The second part of the Tinetti test is an observation walk with 9 items that are simply quoted “normal” or “abnormal”. These items are mostly difficult to assess. This despite being the most common test in Gerontology, it is rather vague in its quotation in particular in the second part that is never used. TT seems to be primarily an educational tool of good quality to assess very accurately the semiotic balance abnormalities as well as the walk of the oldery (Pérennou & al, 2005).

Test unipodal

Tinetti et al (Tinetti ME, 1986), unipodal showed that the test is a good way of identifying non - fallers elderly fallers of the extent that they are unable to hold this position for 30 seconds. Also, the simplicity and the validity of this test led us to use (Toulotte, Thévenon & Fabre, 2004).

The test methodology was as follows: subjects were asked to stand on one leg with eyes open for 30 seconds. The stopwatch was starting from the foot of the free leg not touching the ground. The free leg should be flexed to know the angles between the trunk and the femur and the femur and tibia were 90° and they were tested using a tee (T). Each base foot (free leg) was recorded. Then the subjects performed the same test under the same conditions but eyes closed (Hurvitz, Richardson, Werner, Ruhl & Dixon, 2000).

RESULT

Regarding the values obtained timed and go test (Table 2). There was a significant improvement in overall score between initial and final evaluation (0.05). And degree of freedom (18). This means that there are significant differences in the results of the experimental groups. And through the previous results, we can see that the proposed program had a positive impact. It contains exercises based on improving motor skills joints and improvement in muscle strength of the lower limbs and joint flexibility. Indeed, Sudarsky and Nashner and Cordo demonstrated that postural instability is due to a decrease in muscle strength of the lower limbs. This decrease could result from a center of displacement before gravity of the axis of the ankles, which would help balance problems and falls (Nashner & Cordo, 1981). Aging skeletal muscle results

histologically by a decrease in density in muscle fibers (mostly type II). Anatomically in a reduction of muscle mass (sarcopenia) and functionally by a decrease in muscle strength (Evelyn & Jacqueline, 2011).

Table 3 compares the test result FW8 before and after training; the experimental group increased significantly (0.05) their average walking speed. But no significant difference statistically was observed between the first forward speed test and the second test in the control group. This is in agreement with the study results (James, Wall, Bell, Campbell & Davis, 2000) where a statistically significant difference (0.05) with 12 degrees of freedom between the pre- and post-test. Daily life walking often involves the added complexity of walking while doing other activities (ie, dual-task or multi-task walking). A complex task of walking may require a greater proportion of the physical and mental capacity, which results in decreased performance not seen the works for simple tasks walking (Brauer, Woollacott, Shumway & Cook, 2001). However, activities of daily living in the home and community require curved path walking ability (eg, walking around a table, avoiding obstacles, street corners navigation (Courtine, 2003)).

In the experimental group training has had positive effects on test results have tinetti et the show an improvement in gait and balance compared to the control group, the results of the calculated value T

Table 2: Comparative study between the control group and the experimental group in the pre-test and post-test in test timed up and go

Timed up and go	Group	Pre-test		Post-test		T value		Degree of freedom	The level of significance
		X1	Y1	X1	Y2	T test calculated	T test tabulated		
Men	Control	16.3	6.12	16.93	6.49	0.22	2.10	18	0.05
	Experimental	15.16	3.92	11.56	2.7	2.38			
Women	Control	16.87	3.06	18.09	1.75	1.09		18	0.05
	Experimental	14.59	2.80	12.06	1.50	2.51			

Table 3: Comparative study between the control group and the experimental group in the pre-test and post-test in the test FW8

Tinetti	Group	Pre-test		Post-test		T value		Degree of freedom	The level of significance
		X1	Y1	X2	Y2	T test calculated	T test tabulated		
Men	Control	15	2	14.9	1.96	0.11	2.10	18	0.05
	Experimental	16.2	1.98	24	1.82	9.13			
Women	Control	14	2.44	13	2	1.16		18	0.05
	Experimental	16	1.76	24.4	1.42	11.69			

experimental and grouped by raising compared to the value tabulated 2.10 and 18 degrees of freedom. This means that there are statistically significant differences in the experimental group results. This study is consistent with the study (sauvage & al.1992) improvement there was statistically significant at the significance level (0.05) and the degree of freedom (12). And compatible with the study (Hue., Ledrole, Seynnes & Bernard,2001), where the improvement was statistically significant between the pre- and post - test to post the significance level (0.004) and the degree of freedom (13). The control group for the value T calculated value and less than the tabulated that means there is no improvement for this group.the previous results demonstrated that physical activity program has a positive effect on improving the walking and balance on the topics are studying. And This is due to the program contained on the exercise of force, balance exercises, Stretching and flexibility exercises, coordination and this has been confirmed by studies that have achieved the same results.

Table 5 shows the results of the experimental group and control group in the pre -test and post -test time measured during static balance test with eyes open and eyes closed. The experimental group (man and woman) is improvement in static balance with eyes open and close relative to the control group. The results of the calculated value T experimental grouped and raise compared to the tabulated value 2.10 and 18 degrees of freedom. These results correspond with the study (Bernard & al, 2004) a statistically significant difference was found in the post-test at significant level (0.04) and degrees of freedom (29). The control group for the value T calculated and less than the value of T tabulated. which means that the level of balance and remained stable there is no progression. But it is remarkable that the time measured during static balance test with eyes closed and less than the time measured during static balance test with eyes open.

This result goes in the same direction as those of the literature.

But it is remarkable that the time measured during static balance test eyes closed lower time measured during static balance test with eyes open. This result is the same meaning as those in the literature, the visual system and revealing imbalance that can disassembled different postures of the body parts to ensure the stability of the body in space. The aging of the balance system and the aging of the vestibular system and visual system. Balance in the trainings reduce the risk of falling and weight training ensures the maintenance of long-term independence (Geneviève, 2011).

The results of the experimental group for both sexes was observed an improvement in the equilibrium level compared to the control group. Which is evidenced by the results, when the value of "T" calculated is greater than the value of "T" and tabulated at the 95 % and 18 degrees of freedom. this is evidence that there are significant differences in the results of the experimental groups. This confirms that there is an improvement from the balance of elderly men and women. Our results point in the same direction as those of Crilly & al. (Crilly, Willems, Trenholm, Hayes & Richardson, 1989) that tested 50 women aged from 72 to 92 years after an exercise program based on postural control for 12 weeks.

Their results on the postural movements with eyes closed and open show a significant improvement compared to a control group for the anteroposterior axis provided eyes closed. All other results are not significant.

DISCUSSION

The aim of this study was to evaluate the influence of a physical activity program on improving the walking

Table 4: Comparative study between the control group and the experimental group in the pre-test and post-test in the Tinetti test

FW8	Group	Pre-test		Post-test		T value		Degree of freedom	The level of significance
		X1	Y1	X1	Y2	T test calculated	T test tabulated		
Men	Control	22.86	3.30	24.98	3.10	1.47	2.10	18	0.05
	Experimental	24.19	2.97	17.37	1.31	6.62			
Women	Control	24.39	5.83	28.39	4.23	1.75			
	Experimental	24.44	5.31	18.85	3.63	2074			

Table 5: Comparative study between the control group and the experimental group in the pre-test and post-test in the test unipoda

Group	Pre-test		Post-test		T value		Degree of freedom	The level of significance
	X1	Y2	X1	Y2	T test calculated	T test tabulated		
EOR								
Men								
Control	1.17	0.71	1.02	0.33	0.61	2.10	18	0.05
Experimental	1.08	0.67	3.02	0.69	6.32			
Women								
Control	1.07	0.29	1.09	0.32	0.73			
Experimental	1024	0.55	1.98	0.65	2.72			
EOL								
Men								
Control	1.12	0.55	0.92	0.32	0.97			
Experimental	1.17	0.54	2.07	0.70	3.19			
Women								
Control	1.02	0.32	0.97	0.26	0.34			
Experimental	1.01	0.71	1.91	0.89	2.49			
ECR								
Men								
Control	1.06	0.40	1.01	0.28	0.40			
Experimental	1.03	0.76	2.80	0.52	6.02			
Women								
Control	0.87	0.59	0.74	0.28	0.63			
Experimental	0.97	0.49	1.72	0.61	3.02			
ECL								
Men								
Control	0.89	0.47	0.81	0.40	0.38			
Experimental	1.17	0.87	1.91	0.62	2.17			
Women								
Control	0.92	0.33	0.91	0.27	0.01			
Experimental	0.94	0.60	1.63	0.67	2.42			

and balance on the elderly. Trainings were adapted according to the results in an assessment of the physical condition measuring three types of important activities result in for the elderly to maintain its functional autonomy.

Results noted that there is a variable improvement in walking and balance, but insufficient compared with the results of assessment tests walking and balance. The experimental group was not out of the danger zone falls, it means we have increased the weeks of training. But we can say that improving the walking and balance is acceptable. And the outcome of the study approved the exercises scheduled for the experimental groups improve strength and muscle power of lower members. Recent

international recommendations define beneficial levels of physical activity for the health of people over 65 advocated muscle strengthening activities (work against resistance) that must complete endurance activities (aerobic) (Who, 2010). These strengthening exercises should be practiced at least 2 days, not consecutive, week in the form of exercises using the major muscle groups (with 8 to 12 repetitions of each exercise (Inserm. 2008). This study demonstrated that physical training based mainly on muscle strengthening, static and dynamic balance. The increase in muscle strength would put the center of gravity at the axis of the pins, thus giving a better balance (Toulotte & al, 2004). Through exercises conducted open and closed eyes and on different surfaces. Meanwhile, the improvement of static

balance could also come from the increase in muscle strength through exercises performed using elastic bands (Lord, Ward, Williams & Strudwick, 1999). Our results also showed a significant improvement of the various operating parameters (speed walking, walking pace). Our study shows that following a period of three months of physical training significantly improved the tests unipodal open and closed eyes, was observed in the experimental group. Does this result goes in the same direction as those of literature, established by (Haeur & al, 2001). The results of our study can then be compared with those reported by (Albinet, Bernard, & Palut., 2006), these authors have in fact recently shown that a program of physical activity two months could improve the static and dynamic balance for the healthy old people. Our results are in the same direction as that of (Brown & al 2000) conducted a randomized clinical study more focused on the physical exercises, In 84 sensitive subjects (83 years on average). The complete program included stretching exercises, coordination, balance, functional desk and muscle building for 3 months with 3 sessions per week. The results show an improved strength, balance, flexibility and functional capacity.

CONCLUSION

This study demonstrated the possibility for elderly people to improve the parameters of walking and static balance through training of 12 weeks based on muscle strengthening, Walking on deferent track and also on the static and dynamic balance the trainings reduce the risk of falling and weight training ensures the maintenance of long-term independence. Therefore, physical training would reduce or delay the effects due to aging and now physical autonomy since no new fall was reported during this training period.

To maintain functional independence along with the increase of life expectancy is one of the key goals of the health policy for the elderly. Maintaining physical activity helps maintain muscle function needed to maintain mobility and ability to perform activities of daily living among seniors. Physical activity prevents the appearance of a number of adverse events related to aging in the elderly generates a wellness accompanied physics.

REFERENCES

Albinet, C., Bernard, P.L., & Palut, Y. (2006). Contrôle attentionnel de la stabilité posturale chez la personne âgée institutionnalis e: effets

- d'un programme d'activit e physique. *Annales de r eadaptation et de m edecine physique*, 49, 625-631. doi:10.1016/j.annrmp.2006.06.004
- Beauchet, O., & Berrut, G. (2006). marche et double t ache: d efinition int erets et perspectives chez le sujet ag e. *psychol neuroPsychiatr vieil*, 4(3), 215-25.
- Belhassen S. (1999a). Chute et alt eration de la vision. In: Jacquot JM, Strubel D et P elissier J. (Eds). *La chute de la personne ag ee*. Masson, Paris, pp 86-91
- Belhassen S. (1999b)., Cons equences du maintien prolong e au sol. In: Jacquot JM, Strubel D et P elissier J. (Eds). *La chute de la personne ag ee*. Masson, Paris, pp 185-190
- Bernard, P.L, Hue O, Eininger C, Ledrole, D, Giraud, P, & Seynnes, O. (2004). Influence d'une activit e physique sur les capacit es posturales de personnes ag ees: effets du temps de pratique, *Annales de r eadaptation et de m edecine physique*, 47,157-163. Doi:10.1016/j.annrmp.2004.10.003
- B eland, n. (2007). Impact d'un programme d'entrainement p eriodis e sur la distance de marche parcourue chez les personnes ag ees de 55 ans et plus. M emoire de la maitrise en kinanthropologie. *Universit e du Qu ebec  a Montr eal*.
- Blanke, D.J., & Hageman, P.A. (1989). Comparison of gait of young men and elderly men. *Arch Phys Med Rehabil*, 69, 144-8.
- Brauer, G.S., Woollacott, M., & Shumway-Cook, A. (2001). The Interacting Effects of Cognitive Demand and Recovery of Postural Stability in Balance-Impaired Elderly Persons. *J Gerontol A Biol Sci Med Sci*, 56A(8), 489-496.
- Brown, M., Sinacore, D.R., Binder, E.F., & Kohrt, W.M. (2000a). Physical and performance measures for the identification of mild to moderate frailty. *J Gerontol A Biol Sci Med Sci*, 55A(6), M350-M355.
- Brown, M., Sinacore, D.R., Ehsani, A.A., Binder, E.F., Holloszy, J.O., & Kohrt, W.M. (2000b). Low intensity exercises as a modifier of physical frailty in older adults. *Arch Phys Med Rehabil*, 81(7), 960-5.
- Brooks, V.B. (1986). *The Neural Basis of Motor Control* New York, NY: Oxford University Press.
- Campbell, A.J., Borrie, J.M., & Spears, G.E. (1989). Risk factors for falls in a community-based prospective study of people 70 years and older. *J Gerontol*, 44(5), M112-M117. Doi: 10.1093/geronj/44.5.M112
- Coste-Salon, M.C., Lafont, C.H., Dupui, P.H., Stephan, E., Albaredo, J.L. & Bessou, P. (1989). Modifications des param etres spatiotemporels de la marche lors du vieillissement:  tude kymographique chez 168 volontaires sains. *L'Ann ee G erontologique* 1995: 107-. *elderly. Gerontology*, 9,439-457.
- Courtine, G., & Schieppati, M. (2003). humain marchant le long d'une trajectoire courbe, I: trajectoire du corps, l'orientation du segment et l'effet de la vision. *Eur J Neurosci*, 18 (1): 177-90.
- Cress, M.E, Buchner, D.M., Prohaska, T., Rimmer, J., Brown, M., & Macera, C. (2004). Physical activity programs and behavior counseling in older adult populations. *Med Sci Sports Exerc*, 36(11), 1997-2003. Doi: 10.1249/01.MSS.0000145451.08166.97
- Crilly, R.G., Willems, D.A., Trenholm, K.J., Hayes, K.C., & Delaquerri ere-Richardson, L. F.O. (1989). Effect of exercise on postural sway in the elderly. *Gerontology*;35(2-3):137-143. Doi:10.1159/000213012
- Elble, R.J., Hughes, L., & Hiddins, C. (1991) The syndrome of senile gait. *J Neurol* (1992) 239(2). 71-75. Doi: 10.1007/BF00862975.
- Evelyne, A., & Jacqueline, G. (2011). *85 fiches d'animation pour les personnes ag ees*. paris: Elsevier masson.
- Genevi e, o. (2011). effets d'un programme d'entrainement adapt e de douze semaines autonomes sur la capacit e fonctionnelle d'ai. d epartement de m edecine sociale et pr eventive facult e de m edecine, universit e laval qu ebec.
- Gillespie, L. D., Gillespie, W.J., Robertson, M.C., Lamb, S.E., Cumming, R.G & Rowe, B.H. (2003). Interventions for preventing falls in elderly people. *Cochrane Database Syst Rev*, (4), CD000340. I: Doi: 10.1002/14651858
- Groupe de travail de l'OMS. (1989). Les chutes chez la personne ag ee,  pid emiologie,  tiopathog en e, pr evention. *L'Ann ee G erontologique*,

- (1989), 15-31.
- Haeur, K., & al. (2001). Exercise training for rehabilitation and secondary prevention falls in geriatric patients with a history of injurious falls. *J Am Geriatr Soc*, 49(1), 10-20. Doi: 10.1046/j.1532-5415.2001.49004.x
- Hue, O., Ledrole, D., Seynnes, O., & Bernard, P.L. (2001). Influence d'une pratique motrice de type " posture-équilibre motricité " sur les capacités posturales du sujet âgé. *Ann Réadaptation Méd Phys*, 44(2), 81-88. Doi: 10.1016/S0168-6054(00)00064-7.
- Hurvitz, E.A., Richardson, J. K., Werner, R. A., Ruhl, A.M., & Dixon, M. R. (2000). Unipedal Stance Testing as an Indicator of Fall Risk Among Older Outpatients. *Arch Phys Med Rehabil*, 81(5), 587-591. Doi: 10.1016/S0003-9993(00)90039-X.
- Institut national de la santé et de la recherche médicale (Inserm), 2008
- James, C. Wall. PhD, C Bell, BS, S Campbell, & Davis, J. (2000). The timed get-up-and-go test revisited: Measurement of the component tasks. *Journal of Rehabilitation Research and Development*, 37 (1), 109—114.
- Jessup, J. V., C. Home, Vishen, R.K., & Wheeler, D. (2003). "Effects of exercise on bone density, balance, and self-efficacy in older women." *Biol Res Nurs*, 4(3), 171-180. Doi: 10.1177/1099800402239628.
- Keller, C., & Fleury, J. (2000). Health promotion for the elderly. *Sage Publications Inc*. p181.
- Lord, S.R., Ward, J.A., Williams, P., & Strudwick, M. (1995). The effect of a 12-month exercise trial on balance, strength, and falls in older women: a randomized controlled trial. *J Am Geriatr Soc*, 43(11), 1198—1206.
- Lusardi, M. M., Pellicchia, G. L. & Schulman, M. (2003). Functional performance 10 community living older adults. *Journal of Geriatric Physical Therapy*, 26(3), 14-22
- Mathias, S., Nayak, U.S., & Isaacs, B. (1986). Balance in elderly patients: the "get-up and go" test. *Archives of physical medicine and rehabilitation*. 67(6), 387.
- Mahoney, J. E., & al. (2007). Kenosha County falls prevention study: a randomized, controlled trial of an intermediate-intensity, community-based multifactorial falls intervention. *J Am Geriatr Soc*, 55(4), 489-98. · Doi: 10.1111/j.1532-5415.2007.01144.x
- Murray, M.P., Kory, R.C., & Clarkson, B.H. (1969). Walking patterns in healthy old men. *J Gerontol*, 24(2), 169-178. Doi: 10.1093/geronj/24.2.169.
- Nashner, L.M., & Cordo, P.J. (1981). Relation of automatic postural responses and reaction-time voluntary movements of human leg muscles. *Exp Brain Res*, 43, 395—405. Doi: 10.1007/BF00238382.
- Nevitt, M.C., Steven, R., Cummings, M.D., Kidd, S., & Black, D. (1989). Risk factors for recurrent non syncopal fall. *Jama*, 261(18), 2663-2668. doi:10.1001/jama.1989.03420180087036.
- Paterson, D. H., Jones, G. R., & Rice, C. L. (2007). Ageing and physical activity: evidence to develop exercise recommendations for older adults. *Can J Public Health*, 32, 69—108. doi:10.1139/H07-111.
- Petrella, J.K., Miller, L.S., & Cress, M.E. (2004). Leg extensor power, cognition, and functional performance in independent and marginally dependent older adults. *Age Ageing*, 33(4), 342—348. Doi: 10.1093/ageing/afh055.
- Pérennou, D., Manckoundia, P. P., Penven, Y., Mourey, F., Launay, F., Pfitzenmeyer, P., & Casillas, J.M. (2005.) Évaluation de l'équilibre en pathologie neurologique et gériatrique, *Annales de réadaptation et de médecine physique*, 48(6), 317—335. Doi:10.1016/j.annrmp.2005.04.009.
- Podsiadlo, D., & Richardson, S. (1991). The Timed Up and Go: a test of basic functional mobility for frail elderly persons. *J. Am Geriatr Soc*, 39(2), 142-148. Doi: 10.1111/j.1532-5415.1991.tb01616.x.
- Prudham, D., & Evans, J.G. (1981). Factors associated with falls in the elderly: a community study. *Age Ageing*, 10, 141-146. Doi: 10.1093/ageing/10.3.141.
- O'Loughlin, J. L., Robitaille, Y., Boivin, J.F., & Suissa, S. (1993). Incidence of and risk factors for falls and injurious falls among the community-dwelling elderly. *Am J Epidemiol*, 137(3), 342-354.
- Sauvage, L., myklebust, B.M., crow- pan, J., novaks, S, millington, P, Hoffman, M.D, hartz, A.J, & rudmam, D. (1992). A clinical trial of strengthening and aerobic exercise to improve gait and balance in elderly male nursing home residents. *Am J Phys Med Rehabil*. 71(6), 333-342.
- Serratrice, G., Daumen-Legre, V., Acquaviva, P.C. (1994). Troubles de la marche du sujet âgé. *La marche humaine et sa pathologie*. Paris: Masson; p. 307-313.
- Shumway-Cook, A., & Horak, F.B. (1986). Assessing the influence of sensory interaction on balance. *Phys Ther*, 66(10), 1548-1550.
- Simonsick, E. M., Guralnik, J. M., Volpato, S., Balfour, J., & Fried, L. P. (2005). Just Get Out the Door! Importance of Walking Outside the Home for Maintaining Mobility: Findings from the Women's Health and Aging Study. *Journal of the American Geriatrics Society*, 53(2), 198-203. Doi: 10.1111/j.1532-5415.2005.53103.x.
- Stella, c., & jacques, c. (2000). Animation pour les personnes âgées 400 exercices pratiques et ludiques. *Lammarre*.
- Sudarsky, L. (1990). gait disorders in the elderly. *N Engl J Med*, 322(20), 1441—1446. Doi: 10.1056/NEJM199005173222007
- Tinetti, M.E., Williams, T.F., & Mayewski, R. (1986). Fall risk index for elderly patients based on number of chronic disabilities. *Am J Med*, 80(3), 429—434. Doi: 10.1016/0002-9343(86)90717-5.
- Tinetti, M.E., Speechley, M., & Ginter, S.F. (1988). Risk factors for falls among elderly persons living in the community. *N Engl J Med*, 319(36), 1701—1707. Doi: 10.1056/NEJM198812293192604
- Tinetti, M.E., Baker, D.I., McAvay, G., Claus, E.B., Garrett, P., Gottschalk, M., Koch, M.L., Trainor, K., & Horwitz, R.I. (1994). A multifactorial intervention to reduce the risk of falling among elderly people living in the community. *N Engl J Med*, 331(13), 821-827. PMID: 8078528
- Toulotte, C., Thévenon, A., & Fabre, C. (2004). Effets d'un entraînement physique sur l'équilibre statique et dynamique chez des sujets âgés chuteurs et non-chuteurs. *Annales de réadaptation et de médecine physique*, 47, 604—610. Doi:10.1016/j.annrmp.2004.03.004.
- Yelnik, A. (2007-2008). Evaluation clinique de l'équilibre. *collège français des enseignants universitaires de médecine physique et de réadaptation*. World organisation Heath (who), 2010.