

WEIGHT TRAINING IN GYMS AS LEISURE TIME PHYSICAL ACTIVITY: THE PRACTITIONER PROFILE

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ABSTRACT. It is gratifying that people of all ages turn to exercise to improve physical fitness components. There is growing evidence that a balanced workout program, including a minimum weight training exercises, sufficient flexibility exercises and enough time for relaxation and recovery, provides long-term benefits (McLatchie, 1993). This type of training, practiced regularly, will reduce the risk of injury and illness (Westcott, 1996). "Currently, RT (resistance training) is a modality of exercise recommended for virtually everyone because it has been shown to enhance health, well-being, and performance in clinical, fitness, and athletic populations" (Ratamess Jr., 2012, p. 9). **Objective of the study:** The objective of this study was to build a profile for participants in weight training that takes place in gyms of Cluj-Napoca. **Methods:** The research was conducted from 14 August 2013 to 20 August 2014 in Cluj-Napoca's weight training gyms. The subjects are practitioners of all gyms where weight training is practised, and where we were granted access. 155 practitioners were interviewed. 47.74% refused participation to our study, and 52.26% accepted permission. For each of the 81 subjects was recorded only one session of training. **Conclusions:** Participation in weight training is done with appropriate frequency. In terms of exercise duration, for most of practitioners, it exceeds the maximum duration of 60 minutes recommended by the American College of Sports Medicine (American College of Sports Medicine, 1990). The small number of participants that correctly identified the muscles included in their workouts can be a signal for fitness instructors and personal trainers to insist more on the transmission of appropriate information needed to apply the principle of conscious participation. Most of practitioners do not give enough importance to periodization because they insert or exclude exercises after starting their training session. The number of sets chosen for the exercises suggests that almost all of our subjects limit to 3-4 sets for every exercise. In terms of planning the execution speed for repetitions, we found none of the practitioners to work with concept of tempo.

Key words: *fitness, weight training, practitioner fitness profile, leisure.*

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REZUMAT. *Antrenamentul cu greutate în sălile de fitness ca activitate fizică de timp liber: profilul practicantului.* Este îmbucurător faptul că persoane de toate vârstele apelează la exercițiul fizic pentru îmbunătățirea componentelor fitnessului fizic. Sunt tot mai multe dovezi care atestă faptul că un program de antrenament echilibrat, cu suficiente exerciții de flexibilitate, cu minimum de exerciții specifice antrenamentului cu greutate și cu timp suficient pentru relaxare și refacere, oferă beneficii pe termen lung (McLatchie, 1993). Acest tip de activitate fizică, practică cu regularitate, va reduce riscul de accidentare și de îmbolnăvire (Westcott, 1996). „Antrenamentul cu greutate este recomandat pentru toate categoriile de persoane deoarece s-a dovedit că îmbunătățește sănătatea, starea de bine și performanța” (Ratamess Jr., 2012, p. 9). **Obiectivul studiului:** Obiectivul acestui studiu a fost construirea profilului practicantului care participă la antrenamentul cu greutate ce se desfășoară în sălile de fitness din Cluj-Napoca. **Subiecți și metode:** Cercetarea s-a desfășurat pe perioada unui an, din data de 14 august 2013 până în data de 20 august 2014, în sălile de fitness din Cluj-Napoca. Subiecții studiului au fost practicanți din toate sălile de fitness în care se efectuează antrenamente cu greutate și în care ne-a fost acordat accesul, între 4 și 6 practicanți din fiecare sală de fitness. Au fost intervievați 155 de practicanți. 47,74% au refuzat participarea la studiu, 52,26% și-au dat acceptul, iar un practicant nu a folosit exerciții cu greutate în antrenament în ziua când a fost înregistrat. **Concluzii:** Participarea la antrenamentul cu greutate se face cu o frecvență adecvată. Durata antrenamentelor, pentru majoritatea practicanților, depășește durata 20-60 de minute, recomandată de către ACSM (American College of Sports Medicine, 1990). Numărul mic de participanți care au identificat corect grupele musculare poate fi un semn pentru instructorii și antrenorii de fitness ca să insiste mai mult pe transmiterea informațiilor corespunzătoare pentru aplicarea principiului participării conștiente. Majoritatea practicanților nu acordă suficientă importanță planificării antrenamentului datorită faptului că introduc sau exclud exerciții în ședința de antrenament după începerea antrenamentului. Deoarece foarte mulți practicanți apelează la serviciile instructorilor din sălile de antrenament, este foarte important să avem instructori bine pregătiți în sălile de fitness pentru antrenamentele cu greutate. Numărul de seturi ales pentru exerciții sugerează că subiecții incluși în cercetare se limitează doar la 3-4 seturi. În ceea ce privește planificarea vitezei de execuție pentru repetări, am constatat la practicanți că nu lucrează cu conceptul de tempo de execuție.

Cuvinte cheie: *fitness, antrenament cu greutate, profil practicant fitness, timp liber.*

Introduction

In order to be able to aspire to a good health you should have a balanced lifestyle, you have to be a good organizer of your spare time. “Physically active individuals tend to be in better health, report more stamina, have more positive

attitudes toward work, and report a greater ability to cope with stress and tension than people who are not physically active” (Weinberg & Gould, 2006, p. 408).

It is gratifying that people of all ages turn to exercise to improve physical fitness components. There is growing evidence that a balanced workout program, including a minimum weight training exercises, sufficient flexibility exercises and enough time for relaxation and recovery, provides long-term benefits (McLatchie, 1993).

American College of Sports Medicine (ACSM) supports that ideal living arrangements ensuring the maintenance and development of the muscular system, the skeletal system and the hormonal system should include weight training exercises (Humphries, 2001). Bones, tendons, ligaments and cardiovascular system benefit from weight training exercises. This type of training, practiced regularly, will reduce the risk of injury and illness (Westcott, 1996). “Currently, RT (resistance training) is a modality of exercise recommended for virtually everyone because it has been shown to enhance health, well-being, and performance in clinical, fitness, and athletic populations” (Ratamess Jr., 2012, p. 9).

Bartek said in 1998 that participation in physical activity was two times a week (Bartek, 1998). The ideal start involves two training sessions per week, increasing the density of training only when the body is ready (Delavier & Gundill, 2012). It is recommended that you do not link more than three consecutive training sessions (i.e., three consecutive days of training) to give the body enough time to rest for recovery and regeneration (Cabral, 2012).

ACSM recommends, for most participants in physical activities, to train between 20 and 60 minutes (American College of Sports Medicine, 1990). After Westcott (1996) 20-30 minutes of weight training combined with 20-30 minutes of cardio training is a practical and productive combination for achieving optimum levels of fitness.

Some people who practice physical exercises relate only to consumption of body fat. Others are aware that the practice of physical exercise reduces the risk of disease. Many people participate to weight training, in their spare time, to increase their endurance and muscular strength; others want muscular hypertrophy, and a part of the population benefit from weight training as a form of rehabilitation (Ratamess Jr., 2012).

Knowing the reasons why people turn to gyms for weight training is important not only for fitness instructors, but also for managers of fitness gyms. Trainer influence over a practitioner is very important. A large number of practitioners rely on gym’s instructors to build their fitness programmes.

ACSM recommends for the vast majority of practitioners a number of 8 to 10 exercises for weight training sessions (American College of Sports Medicine, 2005). An advanced training program can include up to 20 exercises for a training session (Baech & Groves 1998).

Several studies have shown that the best results, with trained individuals were obtained when they worked with a number between 4 and 8 sets for muscle group, while the most effective number is 4 sets for beginners (Ratamess Jr., 2012).

ACSM recommends a speed of execution for all repetitions small to moderate for beginners and moderate for others, once you have enough experience (Ratamess Jr., 2012). Using the concept of tempo is very useful in quantifying the volume of effort. The effort's volume can also be expressed by referring to the time in which a muscle is under tension because changing the execution speed changes metabolic consumption. It is important to take into account the time under tension when we analyse the volume of effort because not all repetitions are done at the same speed of execution (Poliquin, 1997).

Objective of the study

The objective of this study was to build a profile for participants in weight training that takes place in gyms of Cluj-Napoca.

Methods

The research was conducted from 14 August 2013 to 20 August 2014 in Cluj-Napoca's weight training gyms. The subjects are practitioners of all gyms where weight training is practised, and where we were granted access. We registered between 4 and 6 practitioners in every gym. 155 practitioners were interviewed. 47.74% refused participation to our study, and 52.26% accepted permission. A practitioner didn't use weights in the day that we recorded his workout. Total number of registered subjects (subjects who used specific weight training exercises) was 81. To build the sample we used a non-random sampling as a member of the population probability of being selected in the sample could not be determined. For each of the 81 subjects was recorded only one session of training.

The data needed for research were recorded on a sheet of observation before and during the workout. The items recorded were: workout time, number of weight exercises, number of sets in the workout, rest intervals proposed by practitioners and rest intervals recorded by us.

Results

Of the 81 subjects 69.14% (56 subjects) were male and 30.86% (25 subjects) female, aged between 18 and 60 years. We present in Table no. 1 a distribution of subjects by age (N=81).

Table no. 1 - Distribution of subjects by age

| | ≤ 20 years | 21-25 years | 26-30 years | 31-35 years | 36-40 years | 41-45 years | 46-50 years | ≥ 50 years |
|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| Subjects | 7 | 22 | 24 | 10 | 7 | 2 | 1 | 8 |
| Percentage | 8.64 | 27.16 | 29.63 | 12.35 | 8.64 | 2.47 | 1.23 | 9.88 |

Levels of education (completed studies) are shown in Table no. 2 (N=81).

Table no. 2 - Distribution by level of education

| | Gymnasium | High School | Faculty | Master |
|------------|-----------|-------------|---------|--------|
| Subjects | 6 | 25 | 28 | 22 |
| Percentage | 7.41 | 30.86 | 34.57 | 27.16 |

Practitioners in the study were asked how many times per week they practice weight training. Results can be viewed in Chart no. 1 (N=81).

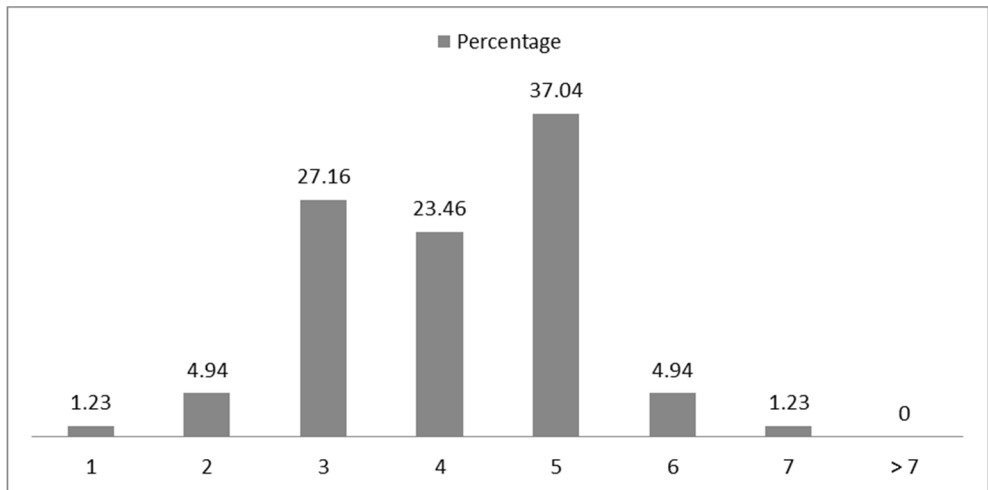


Chart no. 1 - Attendance to weight training, every week

The registered workout time was between 26 minutes and 133 minutes, with an average of 70.05 minutes. In Chart no. 2 it can be observed the workout time distribution (N=80).

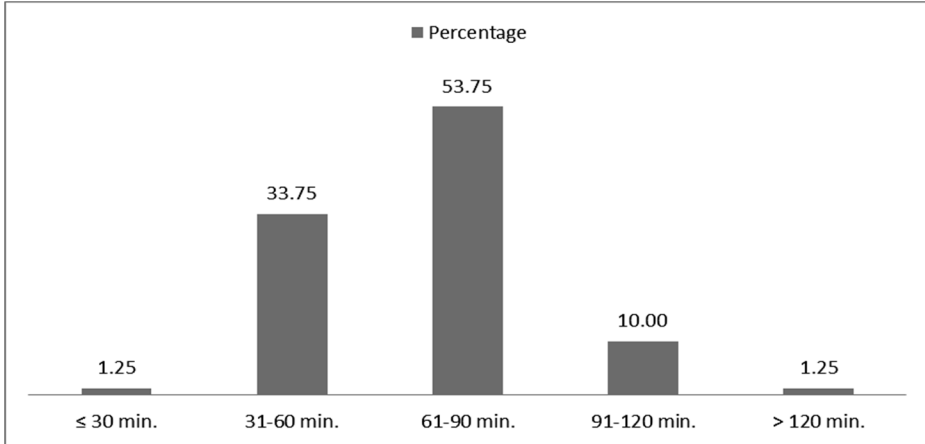


Chart no. 2 - Workout time distribution

Reasons for participating in weight training, as our subjects stated, are: Body maintenance, Muscle mass, Body fat reduction, Body toning, Muscle striation, Improvement of fitness, Maintenance of fitness, Health, Agility, Relaxation, Knee pain relief. The percentage distribution can be analysed in Chart no. 3 (N=81).

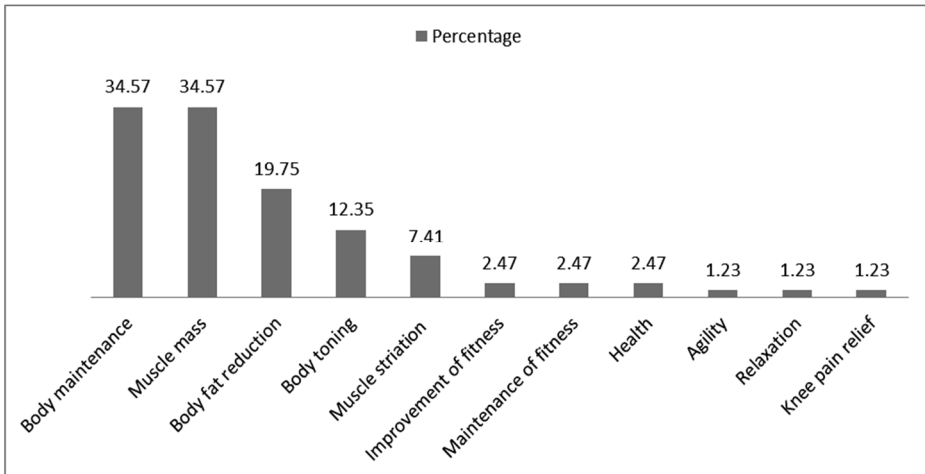


Chart no. 3 - Reasons for participating in weight training

From the methodical point of view we were interested if practitioners are able to correctly identify muscle groups that they have included in their programs. We were interested if they worked other muscles besides those proposed before training or if they have omitted some muscles from their programme training. These details can be observed in Table no. 3 (N=80) and Table no. 4 (N=80).

Table no. 3 - Percentage of muscles that have been appointed

| | Only area of muscles correctly named (or muscles partially correctly named) | Muscle groups correctly named |
|------------|--|-------------------------------|
| Subjects | 75 | 5 |
| Percentage | 93,75 | 6,25 |

Table no. 4 - Compliance of training plan
regarding muscle groups included in it

| | They worked other muscles besides those mentioned before workout | They didn't worked all muscles mentioned before workout |
|------------|---|--|
| Subjects | | |
| Percentage | 42,50 | 8,75 |

Of the 81 practitioners, 28 (34.57%) have requested assistance from another person to build their workout (see Table no. 5, N=81).

Table no. 5 - Assistance in workout planning

| | No | Yes |
|------------|-------|-------|
| Subjects | 53 | 28 |
| Percentage | 65,43 | 34,57 |

Among those who received assistance to build their workout many of them have turned to the instructor of fitness gym (see Chart no. 5, N=81).

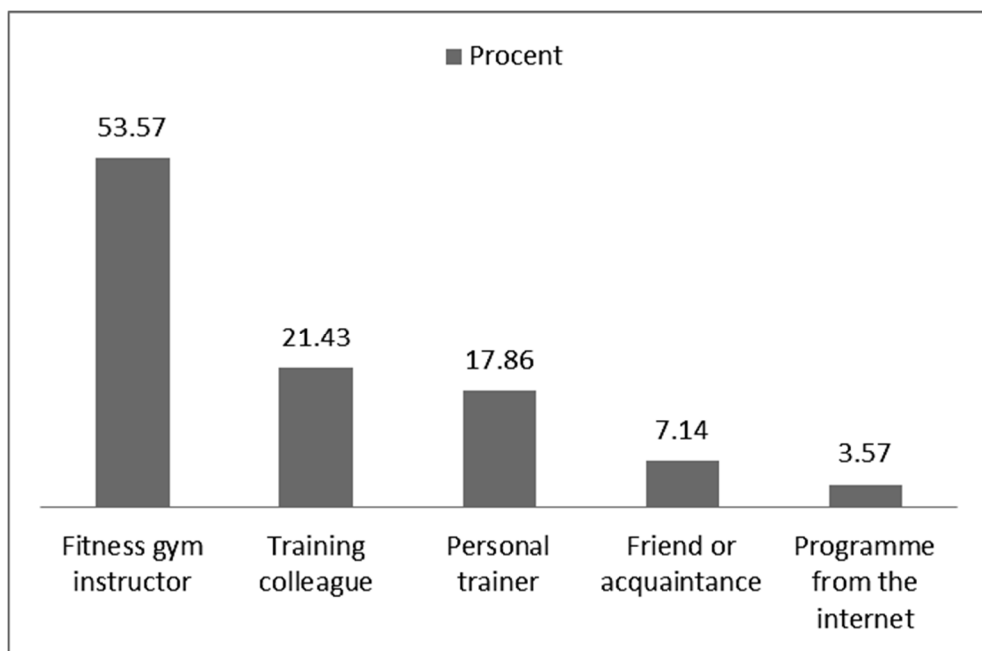


Chart no. 4 - Assistance for personal workout

We present in Table no. 6 (N=81) how often the practitioners refer to the following sources when they need information for weight training: training mates, internet (written sources), internet (audio, video), printed magazines, printed books, specialized courses accredited by an authority in the field.

Table no. 6 - Sources of information

| | Never | Sometimes | Often | Very often |
|---|-------|-----------|-------|------------|
| Training mates | 17.28 | 48.15 | 28.40 | 6.17 |
| Internet (written sources) | 13.58 | 40.74 | 32.10 | 13.58 |
| Internet (audio, video) | 20.99 | 41.98 | 28.40 | 8.64 |
| Printed magazines | 49.38 | 35.80 | 9.88 | 4.94 |
| Printed books | 64.20 | 27.16 | 4.94 | 3.70 |
| Specialized courses accredited by an authority in the field | 77.78 | 17.28 | 2.47 | 2.47 |

As regards the cooperation with a personal trainer, 70.37% (57 subjects) of them have never appealed to the services of a personal trainer. We can track this distribution in Chart no. 5 (N=81).

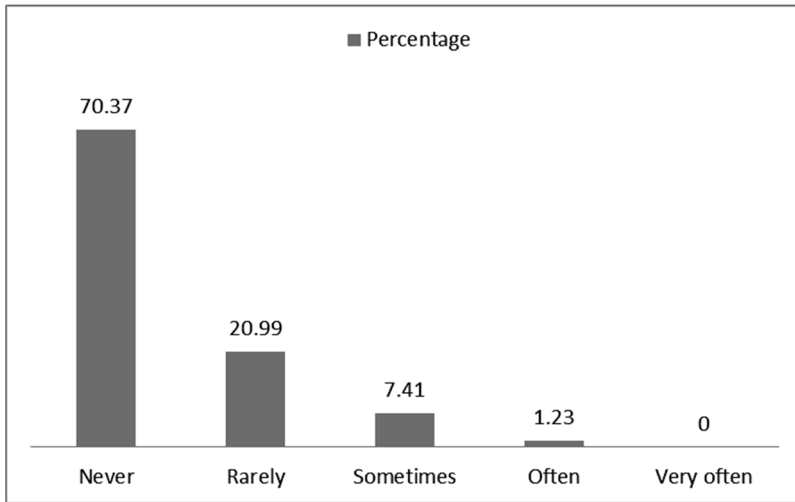


Chart no. 5 - Working with a personal trainer in the field

Practitioners were asked if they use dietary supplements to support the weight training exercise. 50.62% (41 practitioners) gave an affirmative answer and 49.38% (40 practitioners) said they do not use supplements to support specific exercise (N=81).

Using the observation chart, we recorded the number of exercises used by every practitioner in its personal training session. Distribution of the number of exercises used in training sessions can be traced in Chart no. 6 (N=80).

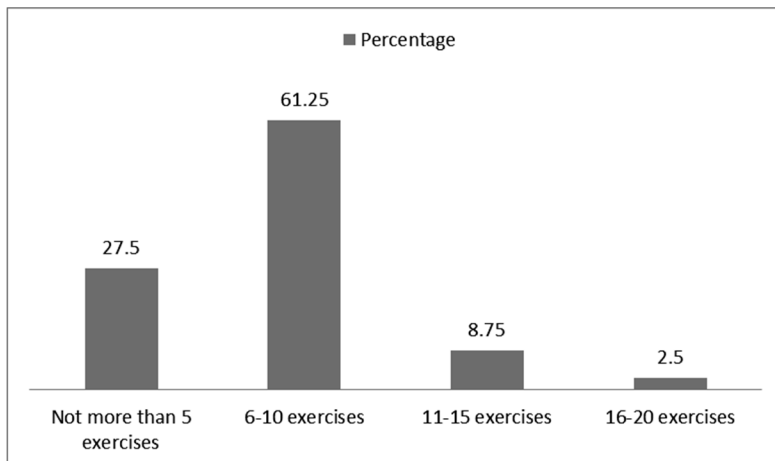


Chart no. 6 - Number of exercises used in training sessions

The number of sets used by practitioners in training sessions can be seen in Chart no. 7 (N=80).

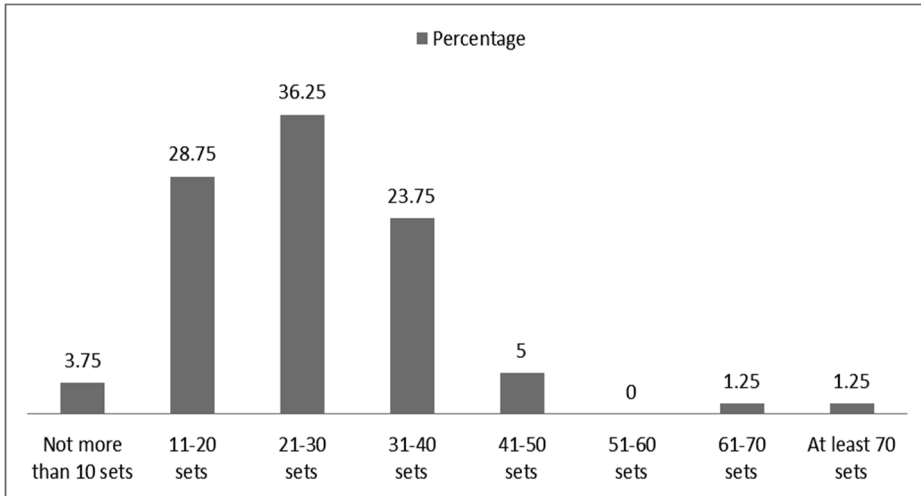


Chart no. 7 - The number of sets used in training sessions

The minimum and maximum number of sets per exercise, registered in the training sessions observed can be seen in Chart no. 8 (N=80) and Chart no. 9 (N=80).

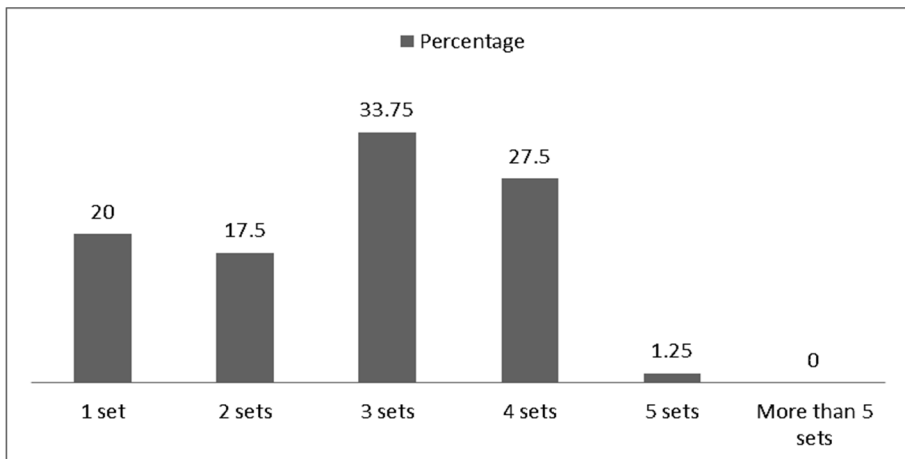


Chart no. 8 - The minimum number of sets / exercise

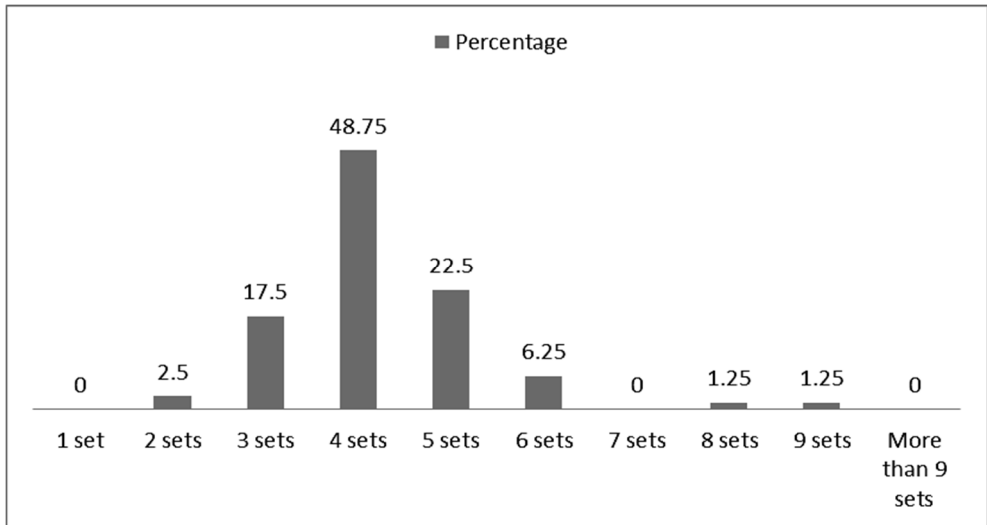


Chart no. 9 - The maximum number of sets / exercise

During our study we recorded the pattern of weight loading used by practitioners for each exercise. We recorded thus 6 models: Constant, Ascending, Ascending-Descending, Descending, Oscillating (or Waves), Descending-Ascending. Distribution of this model, depending on the personal style, can be traced in the Chart no. 10 (N=80).

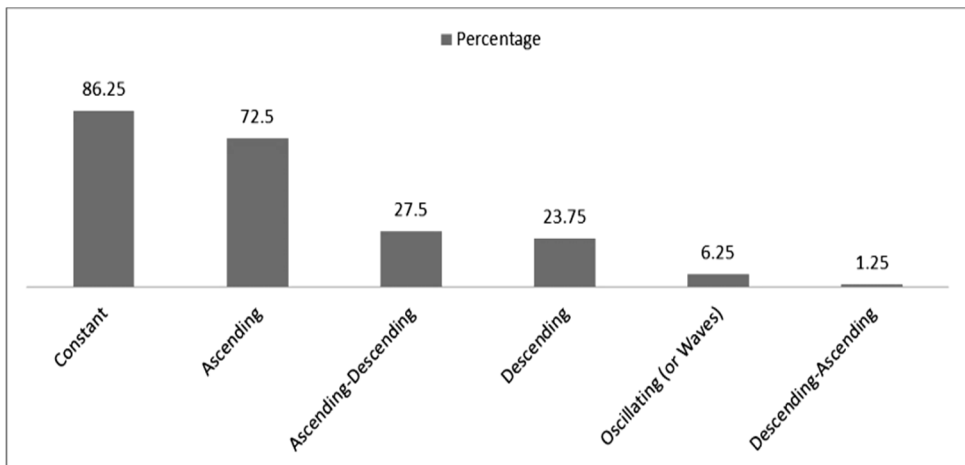


Chart no. 10 - The pattern of weight loading

There was recorded the execution speed for each subsequent repetition by dividing the duration of exercise to number of repetitions. We obtained, thus, a minimum of 0.5 second per repetition and a maximum of 10 seconds for a repetition. This distribution can be traced in Chart no. 11 (N=80).

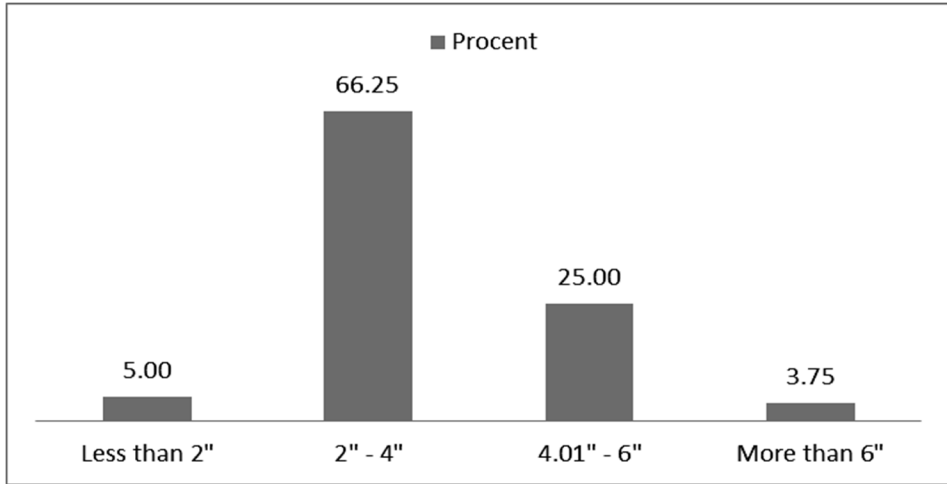


Chart no. 11 - Distribution of practitioners based on the execution period of repetitions

No practitioner has proposed a specific number of repetitions to use in the personal workout. We did not find any practitioner to use the concept of tempo (an exact speed of movement) for their repetitions.

Discussion

Table no. 7 shows the practitioners behaviour according to the criterion followed by our study.

Table no. 7 - Profile of practitioner in weight training

| The criteria considered | Behaviour of our subjects |
|------------------------------------|---|
| Participate in weight training ... | ... 3, 4 or 5 times a week. |
| Total duration of the workouts ... | ... Ranged from 61-90 minutes for most of practitioners. |
| Adhere to weight training ... | ... For body maintenance; ... To increase muscle mass. |

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| The criteria considered | Behaviour of our subjects |
|---|---|
| He/she knows what muscle groups are used in the exercises practiced ... | ... Most often identifies the anatomical part; ... Very rarely identifies the main muscle involved in exercise performed. |
| Complies with the training program planned before ... | ... Often they work other muscles in addition to those proposed; ... Sometimes omit certain muscles from those proposed for that training. |
| Planning the weight training workout ... | ... Often turn to help of others, most often by the gym instructor. |
| Typically informs him/her about weight training ... | ... Most frequently by the internet (written sources, audio, video); ... Seldom from printed books and never from specialized courses. |
| Working with a personal trainer in weight training ... | ... It is avoided almost by all practitioners; ... The practitioners who had a collaboration with a personal trainer asked for help in the execution of the exercises included in the training program; ... Is the plan for most of practitioners. They want to be helped to perform the exercises correctly; ... Can help practitioners to achieve their objectives, argue almost all subjects. |
| Use of dietary supplements to support specific efforts ... | ... Is done for half of practitioners surveyed; ... Includes between one and three supplements, for most of the practitioners. |
| Most practitioners include in their workout ... | ... Between 6 and 10 exercises; ... Between 11 and 40 sets. |
| The minimum number of sets per exercise ... | ... It is 3 or 4 for most of practitioners. |
| The maximum number of sets per exercise ... | ... It is 4 for half of registered practitioners. |
| The pattern of weight loading ... | ... Widely used by practitioners in weights training were Constant model and Ascending model. |
| The speed execution of repetitions ... | ... For most of practitioners it is between two and four seconds. |
| Addressing a precise execution tempo for repetitions ... | ... It was not encountered at any practitioner. |

Conclusions

Participation in weight training is done with appropriate frequency. In terms of exercise duration, for most of practitioners, it exceeds the maximum duration of 60 minutes recommended by the American College of Sports Medicine (American College of Sports Medicine, 1990).

The small number of participants that correctly identified the muscles included in their workouts can be a signal for fitness instructors and personal trainers to insist more on the transmission of appropriate information needed to apply the principle of conscious participation.

As regards the compliance with the training program planned in advance, we can say that most of practitioners do not give enough importance to periodization because they insert or exclude exercises after starting their training session.

Because so many practitioners turn to services of instructors from fitness gyms, it is very important to have well-trained instructors in weight training gyms for workouts to be a success.

We believe that practitioners do not distinguish between the role of the gym's instructor and personal trainer as the main reason for working with the personal trainer is only to show them the correct form of exercise. It is necessary to improve and diversify strategies to educate the practitioners of weight training in order to understand the role and the importance of personal trainer in this field.

The number of sets chosen for the exercises suggests that almost all of our subjects limit to 3-4 sets for every exercise. Several studies have shown that the best results, with trained individuals, were obtained with a number between 4 and 8 sets for muscle group, while, for beginners, the most effective number of sets is 4 (Ratamess Jr., 2012).

In terms of planning the execution speed for repetitions, we found none of the practitioners to work with concept of tempo.

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