REPORT

Report Nr.: IO1-ID1.2

Report Title:

Report on the results of the surveys and focus groups

Date: 27-06-2019

Report on the results of the surveys and focus groups

June 27, 2019

Fall-In-Age:

Innovative Training for Technology-based Frailty and Falls Management

Erasmus+ KA203

(2018)

Erasmus+

European Union Programme for Education, Training, Youth and Sport
Key Action 2 – Cooperation for Innovation and the Exchange of Good Practices
Action Type 203 –Strategic Partnerships for Higher Education

Agreement number: 2018-1-PT01-KA203-047343

DOCUMENT TITLE:

Report on the results of the surveys and focus groups

PROJECT IDENTIFICATION:

Title: Innovative Training for Technology-based Frailty and Falls Management

Acronym: Fall-in-Age

Reference: 2018-1-PT01-KA203-047343 (Erasmus+)

Start Date: 1st November 2018

Duration: 24 Months

Project Electronic Card:

https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2018-1-PT01-KA203-047343

Website: http://fallinage.tecnico.ulisboa.pt/

PROJECT COORDINATOR:

Universidade de Lisboa

Contact Address:
Instituto Superior Técnico
Av. Rovisco Pais, 1
1049-001 Lisboa
Portugal
Tel: +351218417024
E-mail: miguelsilva@tecnico.ulisboa.pt

CONSORTIUM:

- European General Practice Research Network (EGPRN)
- Instituto de Biomecánica de Valencia (IBV)
- Istituto Nazionale di Riposo e Cura per Anziani (INRCA)
- Universidade de Lisboa (UL, IST-UL, FMH-UL)

REPORT ISSUE DATE: June 27, 2019

Project Funded by the European Union under the Erasmus+ Programme	

ID.1.2. Report on the results of the surveys and focus groups.

Vanessa Jiménez (IBV)
Jose María Baydal (IBV)

Valencia, Spain
June 2019

Gathering of specific training requirements:

Research Introduction

RESEARCH INTRODUCTION:

Research process: qualitative + quantitative

This report contains the conclusions derived from the study and analysis of the training needs in the field of Innovative Training for Technology-based Frailty and Falls Management, main purpose of Fall-in-Age project. In particular, Fall-in-age project aims for transferring and updating knowledge in New Biomechanical Technologies for Evaluation of Frailty and Reduction of Falls. This course will be addressed to clinical professionals, students, etc… as well as other professional agents involved in this discipline.

The executed work in ***T1.1: Gathering of specific training requirements*** has been divided into two key tasks:

- Extraction, gathering, specification and analysis of the formative needs.
- The definition of the learning objectives with the purpose to fulfil the detected needs, as well as defining the learning modules of the course.

RESEARCH INTRODUCTION:
Research process: qualitative + quantitative

Main topics that have been tacked in the research based on these 4 blocks:

- **Identification of the current knowledge practices** for evaluation of functional deterioration and frailty and falls management.
- **Assessment of the participant's interest in the application of new methodologies and technologies** for evaluation of functional deterioration and frailty.
- **Training interest topics** to be included in the course.
- **Analysis of the course structure**, namely learning methodologies, duration, grading, accreditation, price, among other topics.

The methodological process followed in the research have consisted of two stages:

A. QUALITATIVE RESEARCH: FOCUS GROUPS

+

B. QUANTITATIVE RESEARCH: ON-LINE SURVEY

RESEARCH INTRODUCTION:

Research process: qualitative + quantitative

A. QUALITATIVE RESEARCH: FOCUS GROUPS

The first stage of research **enabled a deep understanding** in the field, **by the technique of Focus Groups**.

The meetings followed a non-structured discussion of ideas and exchange of points-of-view. Participants were in a relaxed environment and spontaneously contributed with opinions based on their background and experience, focusing the debate in the four main objectives of the session (detailed in previous page). **4 Focus group were done and 29 participants in total** participated in all the sessions carried out by the four partners **in Israel, Portugal, Italy and Spain.** All the participants were experts or students in some area of knowledge related to functional decline and frailty.

B. QUANTITATIVE RESEARCH: ON-LINE SURVEY

The second stage of research **enabled to obtain quantitative measurements**. In this research phase an **on-line questionnaire** has been prepared in order to **define and select training course contents taking into account potential user's point of view**. In addition, information regarding course features, previous knowledge...etc. is collected in this survey and all serve as a **strong base to iterate and fine-tune training course in order to be aligned with potential user's needs & wants.**

Connecting with the main ideas & interesting topics that were discussed in the focus groups, a scheme of contents was developed in order to test on the on-line survey with the objective of defining and select training course contents taking into account potential user's point of view.

228 final completed surveys where achieve with the on-line survey.

A. QUALITATIVE RESEARCH:

FOCUS GROUPS

QUALITITIVE RESEARCH INDEX

1. INTRODUCTION: METHODOLOGY, TECHNICAL DATA, SAMPLE PROFILE
2. MAIN FINDINGS REGARDING BACKGROUND AND KNOWLEDGE ON THE AREA
3. DESIDERABLE TRAINING REQUIREMENTS
4. RELEVANT TOPICS FOR TRAINING

1. INTRODUCTION:
Methodology, technical data & sample profile

METHODOLOGY:

Focus group technique was the one developed in this stage of research. The meetings followed a non-structured discussion of ideas and exchange of points-of-view. Participants were in a relaxed environment and spontaneously contributed with opinions based on their background and experience. All partners followed the same discussion guide in order to have homogeneous planning for the session and get as maximum feedback as possible regarding the main objectives detailed in a similar way.

DURATION & NUMBER OF SESSIONS:

Each focus group session has a duration of 1:30 hours.

LOCATION & DATES OF FIELD:

4 Focus group session developed in 4 different countries detailed below:

- **Israel**: 6th January 2019 in Tel Aviv
- **Portugal:** 24th January 2019 in Lisbon
- **Italy:** 5th February 2019
- **Spain:** 20th February 2019 in Valencia

PARTICIPANTS:

A total of 29 participants in all the sessions carried out by the four partners. Israel: 6 participants, Portugal: 6 participants + (3 observers), Spain: 8 participants, Italy (9 participants).

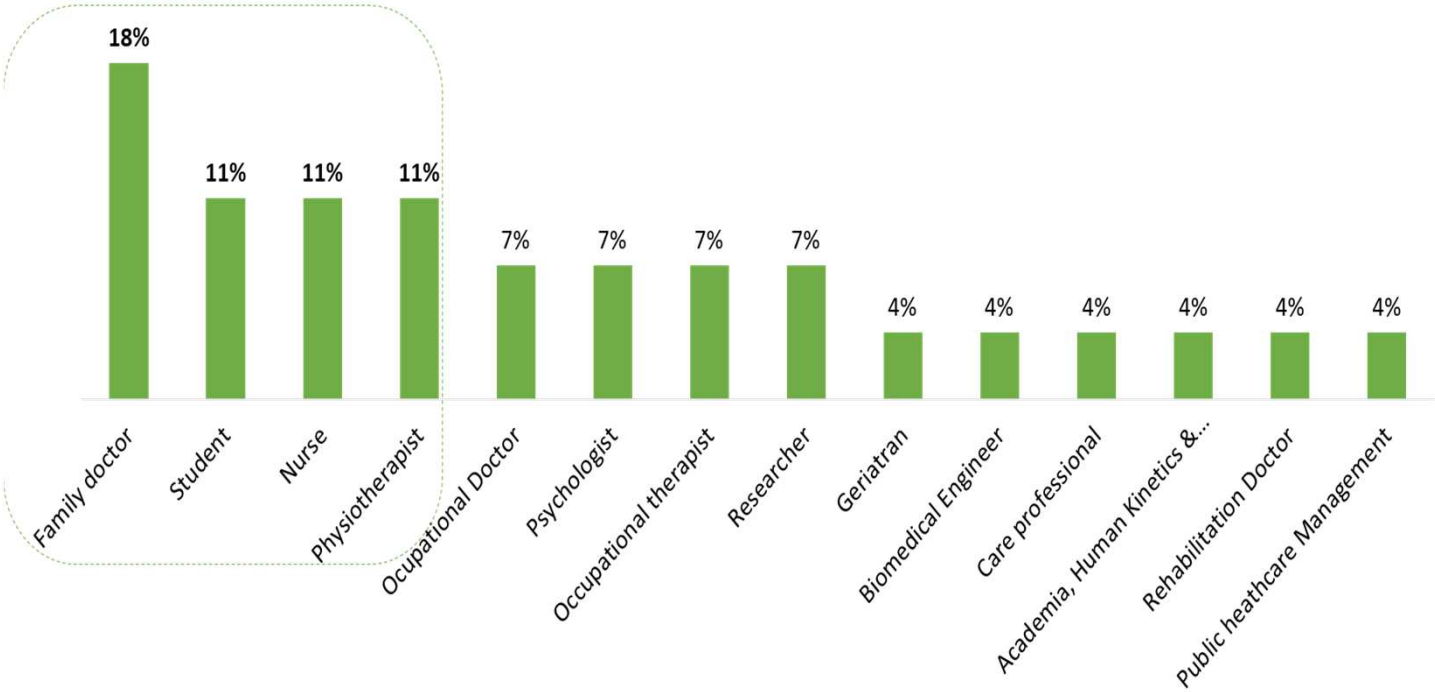
1. INTRODUCTION:

Methodology, technical data & sample profile

SAMPLE PROFILE:

All the 29 participants in the focus groups, were students or experts in some area of knowledge related to functional decline and frailty. Additionally one facilitator as well as three observers were present (but not participated) in the focus group session in Lisbon (Portugal).

Distribution of participants attending roles is detailed in the graphic below. Remark the mix of participants that enables having a rich debate, and remark those participants' roles with more representation where: family doctors, students, nurses and physiotherapists.



2. MAIN FINDINGS REGARDING BACKGROUND AND KNOWLEDGE ON THE AREA

All the ideas that merge in the focus groups developed by the 4 partners of the projects could be grouped in 5 main ideas:

IDEA 1	Holistic view of frailty and functional decline, considering psychosocial as well as biological aspects.
IDEA 2	Importance of active healthy aging.
IDEA 3	Assessment-detection as a key stage. Current knowledge and ways of detection as well as new biomechanical technologies focused in assessment.
IDEA 4	Proper and adapted environmental conditions (in-home) as a key aspect in order to prevent falls.
IDEA 5	Integration and collaboration between patients, caregivers (professional and non-professionals) and professionals as a proper way of prevent risk of falls.

All these ideas are developed more in depth in the extended deliverable of the focus groups.

3. DESIDERABLE TRAINING REQUIREMENTS I

STRUCTURE

In general terms participants consider a desirable training should be structured in different modules (from 3 to 6), allowing the subdivision of ad-hoc contents. Focus training in short-term modules is desirable, because too long courses is a barrier and finally professionals do not enrol. So it is better shorter training divided in different modules.

DURATION

Hours consider optimal of training goes around 40h-50h of training and apart autonomous work. Portugal participants agreed in 40 hours of lecture and 72 hours of autonomous work.

QUALIFICATIONS OF INSTRUCTORS

Qualified instructors with experience is optimal, and Spain participants also consider necessary having a variety of professional in different areas necessary to really cover a holistic vision of frailty.

CONTENTS

Theoretical background highlighting key aspects is necessary, but not the main part. Practical training and use of real case studies is the most desirable training content.
Course should be perceived as a useful tool of awareness and prevention related with ageing, frailty and falls as participants in Spain declare.
Course should serve as a base knowledge for students as well non-expert professionals that could also share training contents with patients and family-caregivers, because training them because also crucial.
On-line training should be interactive and including videos, simulations and possibility of interact with teachers. In Spain, professionals consider that some complementary presently training would be also desirable.

3. DESIDERABLE TRAINING REQUIREMENTS II

CERTIFICATION

Training should have a recognition and a certification is consider relevant as well as accreditation.

POTENTIAL USERS

Course could be addressed to a wide range of graduate students in order to have a necessary background and training in frailty detection and risk of falls prevention, as well as general professionals such as primary doctors and nurses (not just professionals expert in frailty) and anyone who work in the scope of frailty and falls prevention.

ECONOMICAL COSTS

Course cost merge in the sessions in different manners: In some cases, they consider that is the organization the one that should pay for it, and not the professional as participants in Italy declare. And also in the cases professional show positive attitude regarding the idea of paying for it but if they really consider it worthy, for example Portugal participants in the focus groups agree than 300 euros is considered and acceptable value for the course in order to maximize number of students, professionals and other people interested in attending the course.

4. RELEVANT TOPICS FOR TRAINING

Connecting with the 5 main ideas detailed below that were discussed in the focus groups, and considering many interesting topics that raised in the 4 focus session developed by the partners, a scheme of contents is considered below divided in 4 main blocks of knowledge.

MODULE 1:
Introduction , background & fundamental concepts

MODULE 2:
Frailty and fall risk assessment & biomechanical technology

MODULE 3:
Reduction of frailty and fall risk

MODULE 4:
Impact of addressing frailty prevention & management interventions on individuals and society

Specific contents of each module are detailed in the following pages.

All the information gathered in focus groups (detailed more in depth in specific deliverable for Focus groups results) and especially the scheme of contents from the 4 main blocks listed above, is the base for a quantitative phase of research. In this quantitative phase, an on-line questionnaire has been prepared in order define and select training course contents taking into account potential user's point of view. In addition, information regarding course features, previous knowledge...etc. is collected in this survey and all serve as a strong base to iterate and fine-tune training course in order to be aligned with potential user's needs & wants. All information gathered from this quantitative stage of research in detailed in next chapter.

4. RELEVANT TOPICAS FOR TRAINING
Module 1 & Module 2

MODULE 1:
Introduction, background & fundamental concepts

- Introduction to fundamental concepts (frailty, falls, aging).
- Importance of frailty and falls.
- Impact of falls on the quality of life of individuals and their families.
- Consequences of frailty and falls on health systems (economic issues, hospitalization, disability, treatment, social cost with caregivers, etc).
- Clinical consequences of falls (fractures, hospitalization, etc.).
- Introduction of risk factors: biological, behavioural, environmental, socio-economics, etc.
- Fall as a multifactorial geriatric condition (environmental factors, individual factors, pharmacological and health factors, etc).
- Facts & figures on frailly and falls: epidemiological data.
- Ageing process across the different age groups.
- The triad of ageing (frailty, sarcopenia, osteoporosis).

MODULE 2:
Frailty and fall risk assessment & biomechanical technology

- Available tools to screen frailty and risk of falls.
- Introduction to biomechanical balance assessment concepts: posturography, Center of Pressure (COP) displacement, etc.
- Assessment of the risk of falling.
- Qualitative and quantitative methodologies by evaluation stage.
- Technologies and medical devices (current as well as emerging ones).
- Biomechanical variables used in the assessment of functional capacity.
- Advantages of the instrumented assessment of falling risk.
- Effective measuring tools that include biopsychosocial holistic vision of frailty.
- Application of biomechanics to assess the relevant factors in determining the risk of falls of elderly people, etc.
- Gait analysis.

4. RELEVANT TOPICAS FOR TRAINING

Module 3 & Module 4

MODULE 3:

Reduction of frailty and fall risk

- Diagnosis of risk factors from a global perspective.
- Solutions that can assist elderly people with high risk of falling.
- Rehabilitation techniques to prevent frailty.
- Training of professional and non-professional caregivers.
- Training of elders that present a risk of developing a frailty condition.
- The role and tasks of different clinical specialities in detection and prevention of frailty.
- Guidelines and protocols for professionals in clinical areas to prevent falls and frailty.
- Environmental evaluation at homes for falls prevention.
- Validated protocols and scales used in clinical practice.
- Importance of psychological and social risk factors in the frailty evaluation (not only biological ones).
- Prevention as a tool to improve the care processes related to frailty and falls.
- Therapeutic actions to reduce the risk of falling (postural re-education, muscle strengthening, rehabilitation of walking,etc).
- Advantages and benefits of the use of new technologies linked with frailty and prevention of falls: in-house monitoring, wearable devices, gamification, health applications for self-care management, self-assessment of risk of fall, home telehealth programs to prevent falls, etc.
- Importance of promoting effective physical exercise performed on a regular basis in schools, at work, etc.

MODULE 4:

Impact of addressing frailty prevention & management interventions on individuals and society

- The role and connection of different professionals and/or organisations on the assessment of the frailty and risk of falls, etc.
- Socio-sanitary areas where the management of the falls of the elderly are important.
- Different scenarios of intervention (work in health centre, gymnasium, domestic environment, within work settings (e.g. Companies), primary care centres, hospitals, long-term care facilities, nursing/residential homes, etc).
- Impact assessment of the interventions on enhancing individuals health and well-being in the professional context of interventions: Gains at a societal and institutional level (reduce levels of mortality, morbidity, systemic costs and impact at the level of public health, etc).
- Guidelines in case of fall.
- Clinical consequences of falls (fractures, hospitalization, etc.).
- Medication intake control.
- Solutions that can assist elderly people after a fall.
- Monitoring and Follow-up of fallers.
- Management of the loss of independency.

B. QUANTITATIVE RESEARCH:

ON-LINE SURVEY

1. INTRODUCTION

INDEX

1. INTRODUCTION:
Methodology & technical data

METHODOLOGY:

An ad-hoc on-line questionnaire was done through the site Surveymonkey.com site. Questionnaire was available in 4 different languages: English, Spanish, Italian and Portuguese.

Links: https://es.surveymonkey.com/r/FALL-IN-AGE_PT (Portuguese version)
https://es.surveymonkey.com/r/FALL-IN-AGE_ESP (Spanish version)
https://es.surveymonkey.com/r/FALL-IN-AGE_IT (Italian version)
https://es.surveymonkey.com/r/Fall-In-Age (English version)

UNIVERSE:

Students or professionals in some area of knowledge related to functional decline and frailty. All partners involved in the project made a strong effort to disseminate questionnaire in an international level so, maximum answers score could be achieve.

SAMPLE:

A total of 228 successfully finished questionnaires were achieved.

Valid questionnaires per language version: Portuguese (n=65), Spanish (n=43), Italian (n=21) & English version (n=99).

DATES OF FIELDWORK:

Fieldwork was developed from 6th May until 10th June 2019.

LENGTH OF QUESTIONNARIE:

Participants spent 11 minutes (mean) to successfully fulfil questionnaire.

NUMBER OF QUESTIONS:

Questionnaire had 30 questions in total.

1. INTRODUCTION: SAMPLE PROFILE I

Regarding sample distribution by gender, **51,8% are women and 37,7% men**. Theres is a 10,5% of the sample that prefered not to detail their gender.

Participants in the survey clasified by their age in 6 big age groups, stands out the **group of 36 to 45 years that represent more than a quarter of the total sample (27,6%)**, **followed by** the previous younger **group of 25 to 35 years** with a representation of nearly a quarter of the sample **(24,6%).**

Country of residence of participants is 77,2% from European Union & Schengen countries, being **Portugal the most representative country with 26,8% of the sample**, followed by **Spain with a 22,4%** representation. On a second level is **Italy with a 9,2% rate.**

93% of participants declare they are working, being **Family Doctor the most representative occupation with a 44,3% rate**, followed by **Physiotherapist (18,4%) on a second level** of representation **and Rehabilitation (7,5%) and Nurse (4,8%)** with sample representation superior to 4% of total sample **on a third level**.

5,7% of the total sample are students from 7 different areas of knowledge, **mainly from Physiotherapist, Biomedical Engineering and Exercise & Health**; all them with a respective representation of 1,3% of total sample.

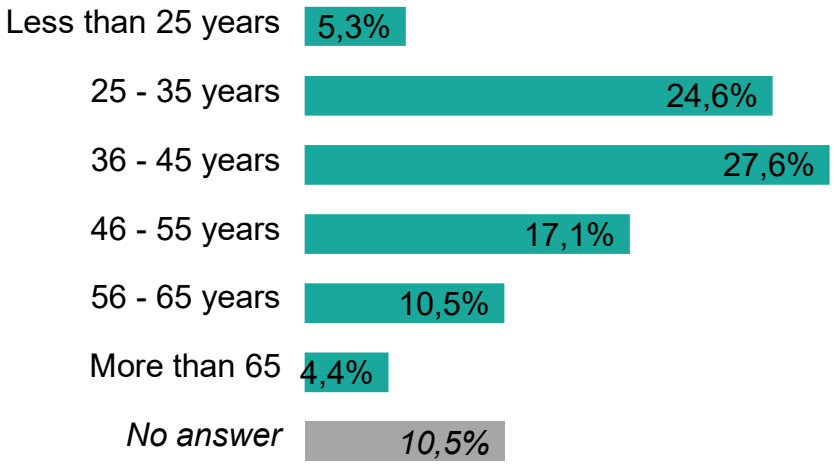
1. INTRODUCTION: SAMPLE PROFILE II

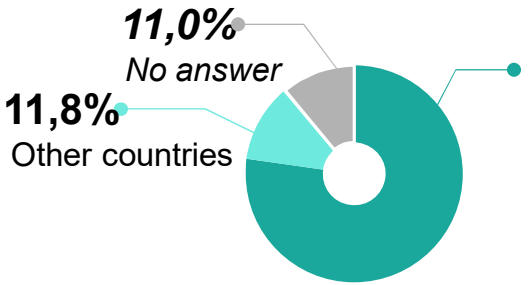
Gender, age and country of residence

51,8% women

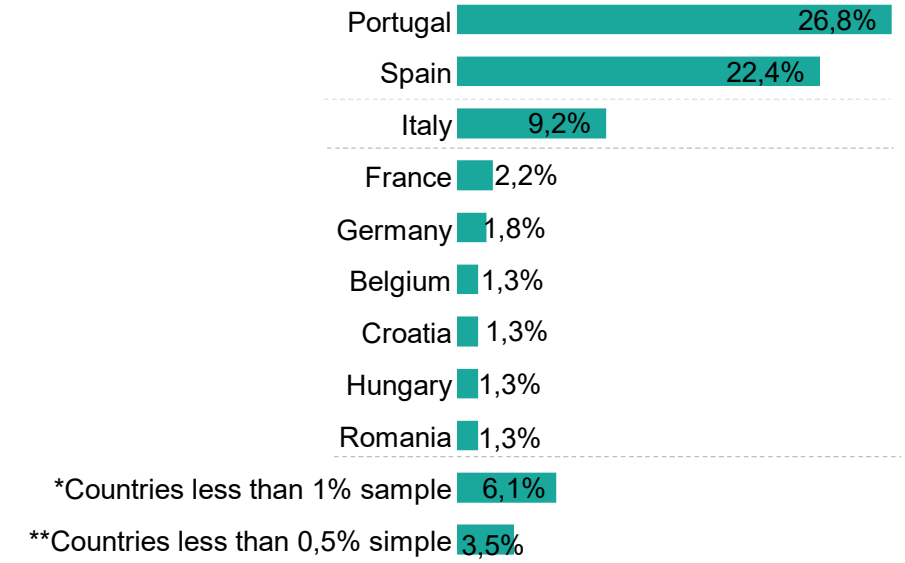
37,7% men

No answer: 10,5%





Which country?

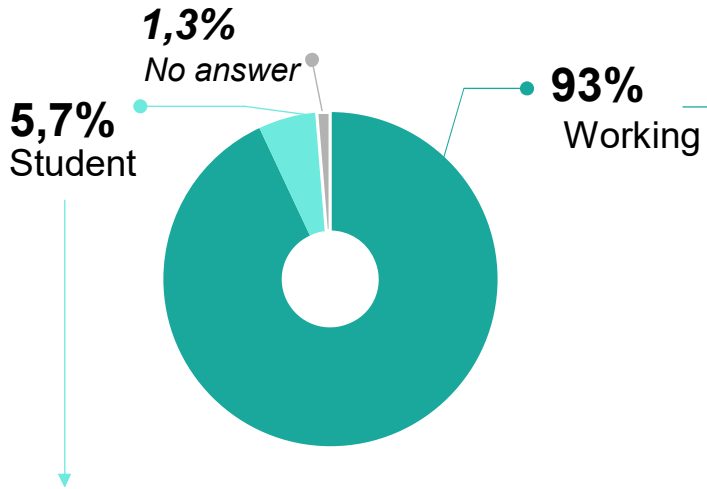


Base: Total sample (n= 228)
Q.27 Indicate your gender. // Q.28 Enter your age // Q.29 In what country do you live

*Austria, Bulgaria, Greece, Ireland, Latvia, Netherlands, Sweden
**Denmark, Finland, Lithuania, Luxembourg, Poland, Slovakia, Switzerland, United Kingdom

1. INTRODUCTION: SAMPLE PROFILE III

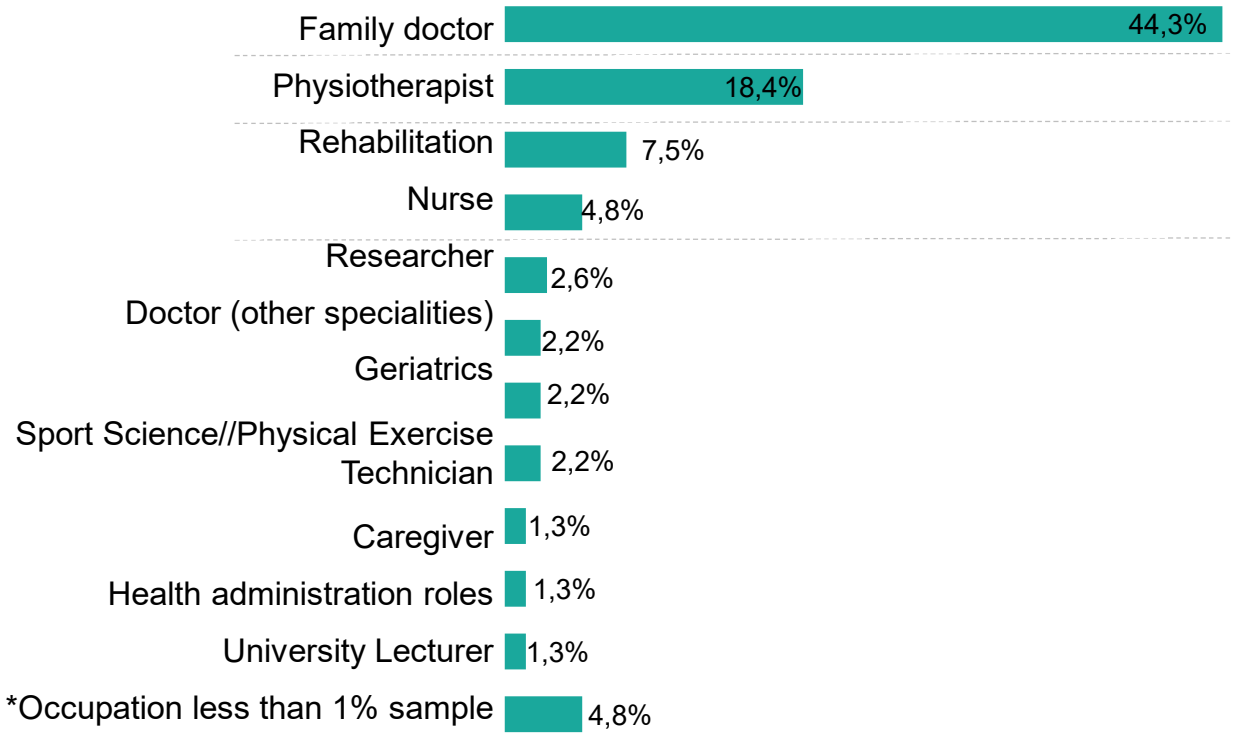
Occupation



Areas of Knowledge

Physiotherapist	1,3%
Biomedical Engineering	1,3%
Exercise & Health	1,3%
Family doctor	0,4%
Functional evaluation	0,4%
Health Administrative tasks	0,4%
PhD: Implementation of fall prevention in the primary care setting	0,4%

Which occupation?



Base: Total sample (n= 228)
Q.1 Indicate your occupation // Q.2 In case you are a student indicate educational area

*Occupational therapist, Biomechanical Engineer, Chemistry, Gerontology, Occupational doctor, Social Worker, Volunteer in Hospital, Other.

2. EXECUTIVE SUMMARY

2. EXECUTIVE SUMMARY

Nearly 4 of 10 participants currently working (93% of total sample)**,** declare that their **knowledge in the area of functional deterioration, frailty and falls before taking their first job was Very poor or Below Average.**

More than 6 of 10 participants declare that they **have not received any specific training in the field in the past 2 years;** and focusing in specific training in the use of biomechanical technology to prevent functional deterioration, frailty and falls **increase the lack of training** rising up to **nearly 9 of 10 participants declaring that they have not received any training in this field.**

6 of 10 participants consider that there is a need of training in the area of functional deterioration, frailty and falls.

Nearly 9 of 10 participants do consider all modules of high interest (Essential-Very Important-Important). **Module 3** (Reduction of frailty and fall risks) **stands as the most interesting with a rate of 86,8%** considering it Essential or Very Important.

Motivations for taking a training course related to the use of new biomechanical technologies to prevent functional deterioration, frailty and falls stand out the following ones as **the most important ones for more than 60% of respondents: Increase my general knowledge in this field (79,4%), Better serve my patients (75,9%) and Improve quality & efficiency of processes in my organization (62,3%).**

Regarding the **most important training requirements** highlight the following ones among participants: **Contents focused on practice (57,3%) and Applicability to clinical practice (51,3%).**

2. EXECUTIVE SUMMARY

For more than 8 of 10 participants on-line teaching stands as a proper tool for training as they consider it Very Suitable or Suitable.

Have **all the training modules available** as you create your online account is **the prefer accessibility option for 55,6%** of respondents.

High interest in performing a pre-test (self-evaluation test) about the contents of the training module **before starting each module among 8 of 10 respondents**.

Nearly 5 of 10 participants consider between 20 and 49 hours adequate hours of training in in a year period.

Regarding **specific time dedicated to devote to a training/study session**, the option of **1 hour is the one with more interest, with 33,8% of respondents** considering this time the optimal one.

Nearly 50% of respondents (49,1%) are **interested in having additional information be updated in information regarding the course.**

3. TRAINING BACKGROUND

3. SUMMARY: TRAINING BACKGROUND I

From the **participants** that declare they are **currently working** (93% of the sample), **21,2% have less that 10 years experience and 22,2% have more than 10 years of experience**. The group of **participants with more than 20 years of experience stands as the most representative one with a total rate of 10,4%**, **followed by** the group that declare that **have 6 to 9 years of experience with a rate of 8,5%.**

Regarding previous knowledge in the area of fuctional deterioration, frailty and falls, participants that are currently working (93% of the sample), declare having a low knowledge in the area before taking they first job, as **just 9,7% of them declare having an Excellent or Above Average knowledge in the field**. **Compared to** the 39,1%, **nearly 4 of 10 participants, that declare that their knowledge was Very Poor or Below Average**.

Focusing in training received in the past two years (training related to functional deterioration, frailty and falls) **more than 6 of 10 of participants declare that they have not received any training (67,1% of the sample)**, and just 29,8% declare that they have received specific training in the area.

Specific training in the use of biomechanical technology to prevent functional deterioration, frailty and falls increase the lack of training in general terms detailed above, **with nearly 9 of 10 participants declaring that they have not received any training in this field (86%),** and just 1 of 10 (11,4%) declare that they have received specific training in use of biomechanical technology.

Regarding the **use of biomechanical technology** in prevention and/or detection of functional deterioration, frailty and falls, **just 14% declare that they use** it. But **among those who have received specific training in biomechanical technology** (11,4% total sample) these **use** of biomechanical technology **rises up to 53,8%.**

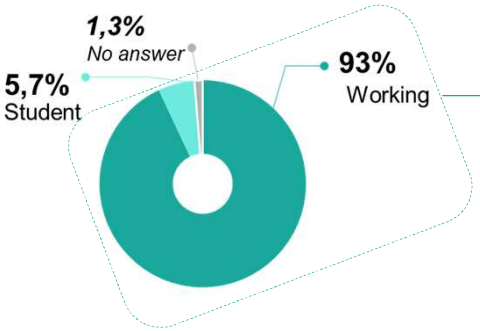
3. SUMMARY: TRAINING BACKGROUND II

More than 6 of 10 participants consider that functional deterioration and frailty are not objectively evaluated.

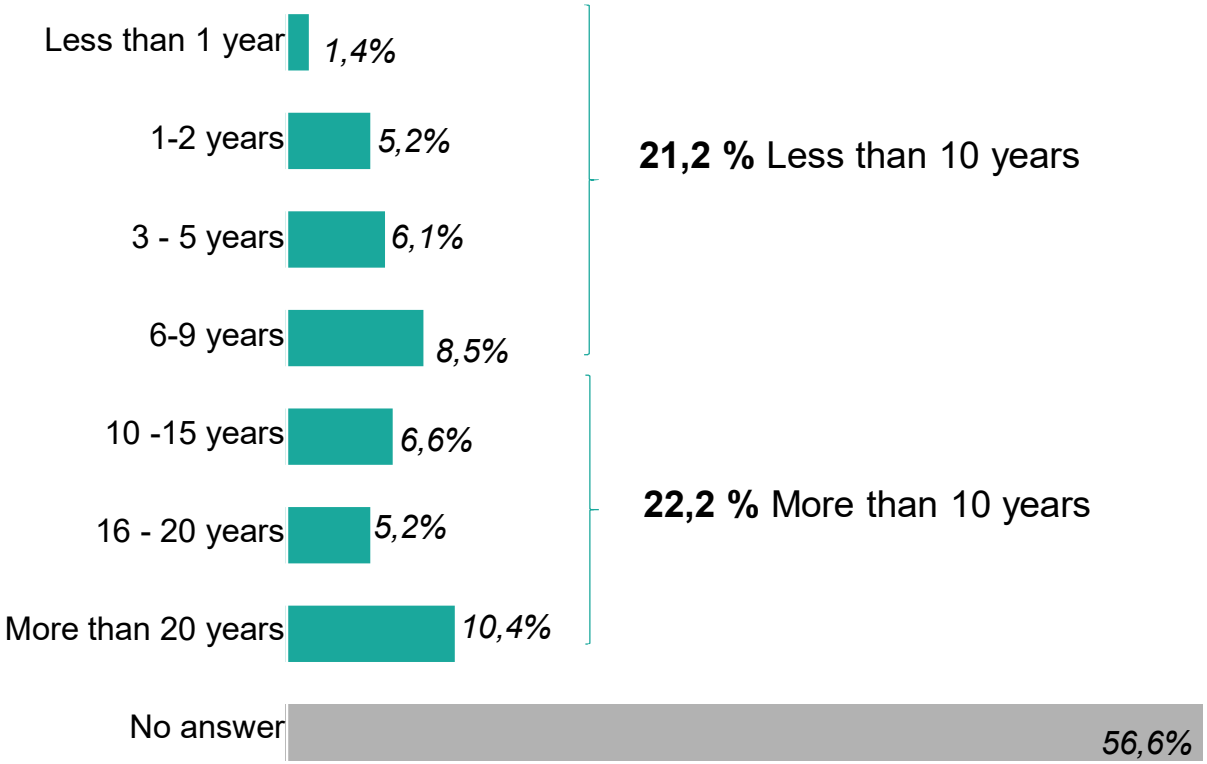
22,8% of total sample detail by whom is functional deterioration and frailty evaluated in an open-end question. **Among them** (22,8% total sample), **nearly 3 of 10 participants consider** (spontaneously) that this **evaluation is undertaken jointly by multidisciplinary team** (26,9%). From those participants that detailed by whom is done the evaluation, **mentioned 1,9 professions** as mean of mentions among all of them. **Physiotherapists** (48,1% from those that answer the question) **followed by Nurses** (30,8% from those that answer the question) **are the professionals that respondents consider in a first level in charge of this evaluation of functional deterioration and frailty.** Also at the same level is detailed **Doctors (in general) + Family Doctor with a global rate of 34,6%** (19,2% and 15,4% respectively). **On a second level of representation are the Occupational Therapist (11,5%) and Geriatrists (9,6%).**

3. TRAINING BACKGROUND

Years of experience in the area



Years of working experience in the area of functional deterioration and falls

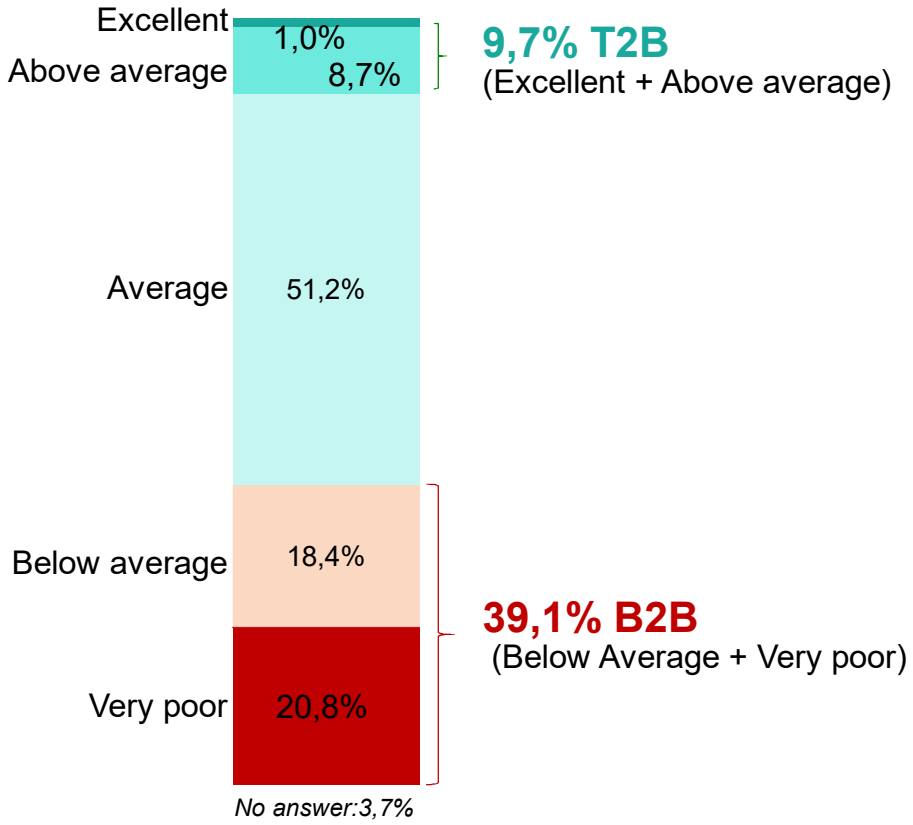


Base: Participants working (n= 212)
Q.1 Indicate your occupation // Q.3 In case you are currently working in the area of functional deterioration, frailty and falls, please indicate the number of years of experience.

3. TRAINING BACKGROUND

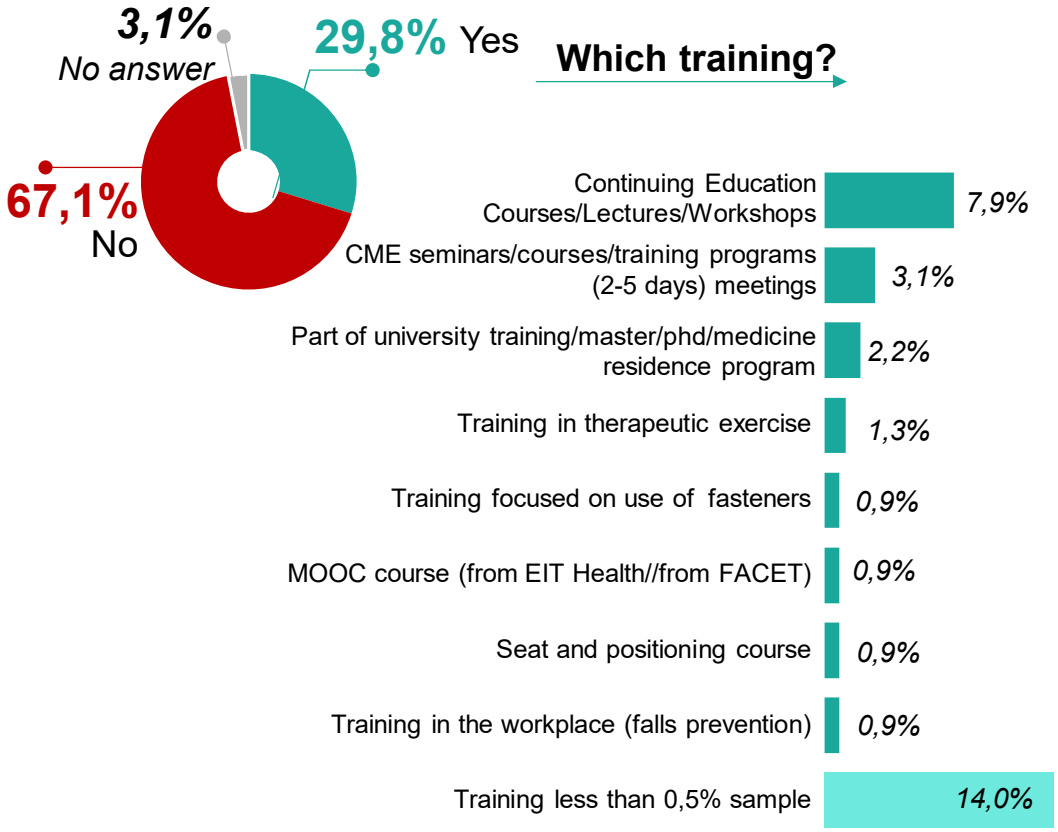
Previous knowledge & training in the area

Training and knowledge in the area of functional deterioration, frailty and fall were **before taking first job was…**



Base: Participants working (n= 212)
Q.4 Before taking up your first job, your training and knowledge in the area of functional deterioration, frailty and fall were…

¿Have received training related to the functional deterioration, frailty and falls **in the last two years?**

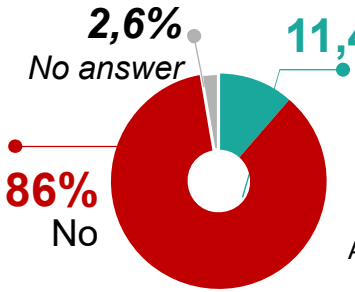


Base: Total sample (n= 228)
Q.6 Have you received any training related to the functional deterioration, frailty and falls in the last 2 years?
Q.7 Which training?

3. TRAINING BACKGROUND

Specific training & use of biomechanical technology

¿Have received specific training in the use of biomechanical technology to prevent functional deterioration, frailty and falls**?**

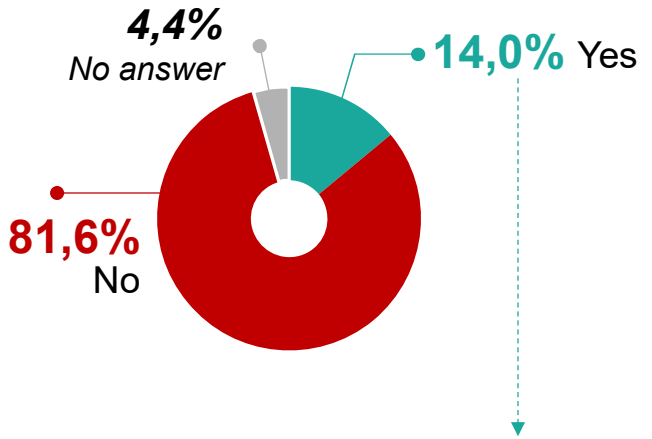


Which training?

Use of Fallskip device	2,2%
Master's degree in Biomechanics	0,9%
Biomechanics Chair of the Movement	0,4%
Attention elders for gait and balance maintenance in the prevention of falls	0,4%
Ergonomics, CPD (center of pressure displacement)	0,4%
Gait biomechanics and different activities of daily life	0,4%
Kynetics	0,4%
Kynetics and TimeUpGo	0,4%
Master in Physiotherapy Sciences	0,4%
Master's degree in functional readaptation	0,4%
Movement analysis course	0,4%
Part of PhD academic program	0,4%
Physical Medicine	0,4%
Physiology	0,4%
Use of portable sensors for fall risk assessment	0,4%
Courses (not specified)	2,6%

Base: Total sample (n= 228)
Q.8 Have you received any specific training in the use of biomechanical technology to prevent functional deterioration, frailty and falls? // Q.9 which training?

Use of biomechanical technology in prevention and/or detection of functional deterioration, frailty and falls?



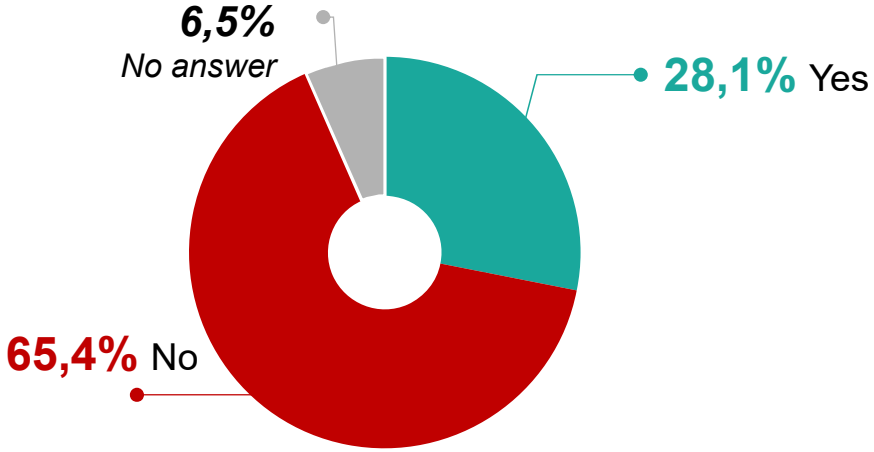
Among those who have received specific training in biomechanical technology (11,4% total sample) these **use of biomechanical technology rises up to 53,8%.**

Base: Total sample (n= 228)
Q.11 Do you usually apply biomechanical technology in prevention and/or detection of functional deterioration, frailty and falls?

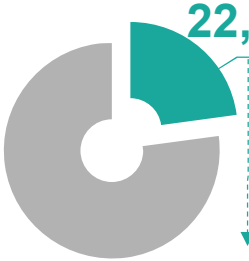
3. TRAINING BACKGROUND

Perception regarding objective evaluation

Do you consider **that functional deterioration and frailty are objectively evaluated**?



By whom professional do you consider is **functional deterioration and frailty evaluated**?

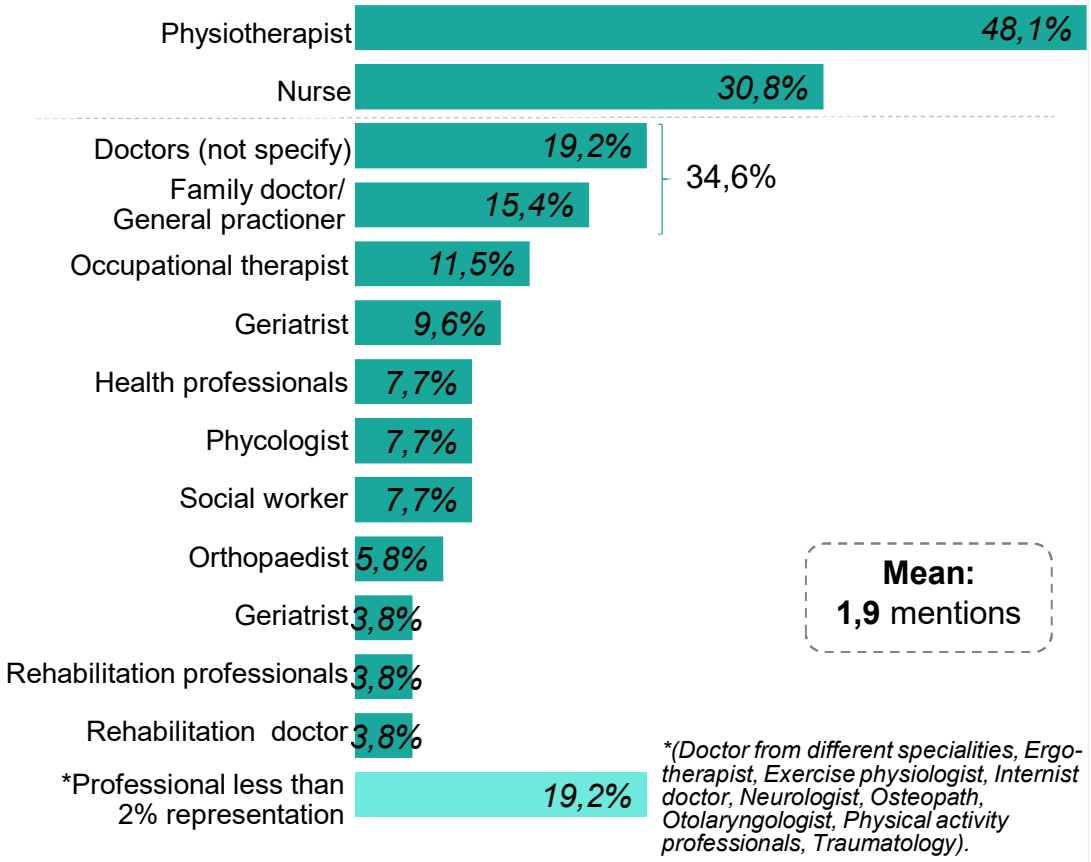


22,8% Participants detail by whom is functional deterioration and frailty evaluated

Among them (22,8% total sample), **nearly 3 of 10 participants consider** (spontaneously) that this **evaluation is undertaken jointly by multidisciplinary team** (26,9%).

Base: Total sample (n= 228)

By whom professional do you consider is **functional deterioration and frailty evaluated**?



Mean: 1,9 mentions

**(Doctor from different specialities, Ergo-therapist, Exercise physiologist, Internist doctor, Neurologist, Osteopath, Otolaryngologist, Physical activity professionals, Traumatology).*

Base: Answer question detailing professional by whom functional deterioration and frailty is evaluated (n= 52)

Q.10 According to your experience, do you consider that functional deterioration and frailty are objectively evaluated? // Detail by whom professional do you consider is this evaluation done

4. TRAINING CONTENTS

4. SUMMARY: TRAINING CONTENTS I

6 of 10 participants (64% of sample) **consider that there is a need of training in the area of functional deterioration, frailty and falls**, as they declare that training needs in these are Very Suitable or Suitable. **Perception of need of training among participants that have received training in the area in the last 2 years**, this rate of interest **rises up 5 points, up to 69,1%** considering this specific training Vey Suitable or Suitable.

Interest in the 4 modules of training is high, having all of them rate superior to 50% of the sample a valuation of Essential or Very Important. Module 3 (Reduction of frailty and fall risks) **stands as the most interesting with a rate of 86,8% considering it Essential or Very Important**. **Followed by Module 2** (Frailty and fall risk assessment & biomechanical technology) **and Module 4** (Impact of addressing frailty prevention & management interventions on individuals and society) **with a rate of heavy interest of 77,3% and 72,6% respectively**. **Module 1** (Introduction, background & fundamental concepts) **is the least interested** one compared with the other 3 modules, **although it has a rate superior of 50% of high interest** (56,2%).

Nearly 9 of 10 participants (89,4% sample) **do consider all modules of high interest** (Essential-Very Important-Important).

4. SUMMARY: TRAINING CONTENTS II

Module 1 specific contents stand out the following ones with a rate superior to 50%: Introduction to fundamental concepts (frailty, falls, aging) (61,8%), Impact of falls on the quality of life of individuals and their families (56,1%) and Introduction of risk factors: biological, behavioral, environmental, socio-economics, etc. (53,5%). **Mean** of contents mentioned in this module as high interest is **4,2 mentions.**

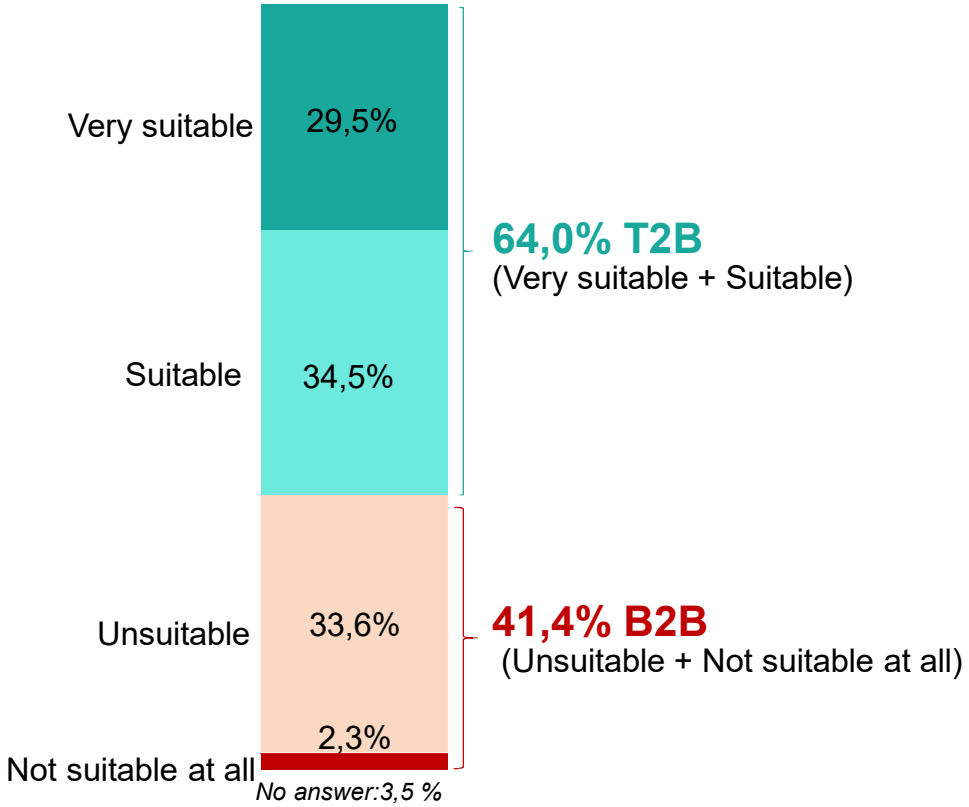
Module 2 specific contents stand out the following ones with a rate superior to 50%: Available tools to screen frailty and risk of falls (76,8%) and Assessment of the risk of falling (56,6%). **Mean** of contents mentioned in this module as high interest is **4,3 mentions.**

Module 3 specific contents stand out the following ones with a rate superior to 50%: Solutions that can assist elderly people with high risk of falling (57,5%), Rehabilitation techniques to prevent frailty (55,7%) and Guidelines and protocols for professionals in clinical areas to prevent falls and frailty (50,0%). **Mean** of contents mentioned in this module as high interest is **5,5 mentions.**

Module 4 specific contents stand out the following ones with a rate superior to 50%: Different scenarios of intervention (work in health center, gymnasium, domestic environment, within work settings, primary care centers, hospitals, long-term care facilities, nursing/residential homes, etc.) (59,6%), Solutions that can assist elderly people after a fall (50,9%) and Guidelines in case of fall (50,0%). **Mean** of contents mentioned in this module as high interest is **4,1 mentions.**

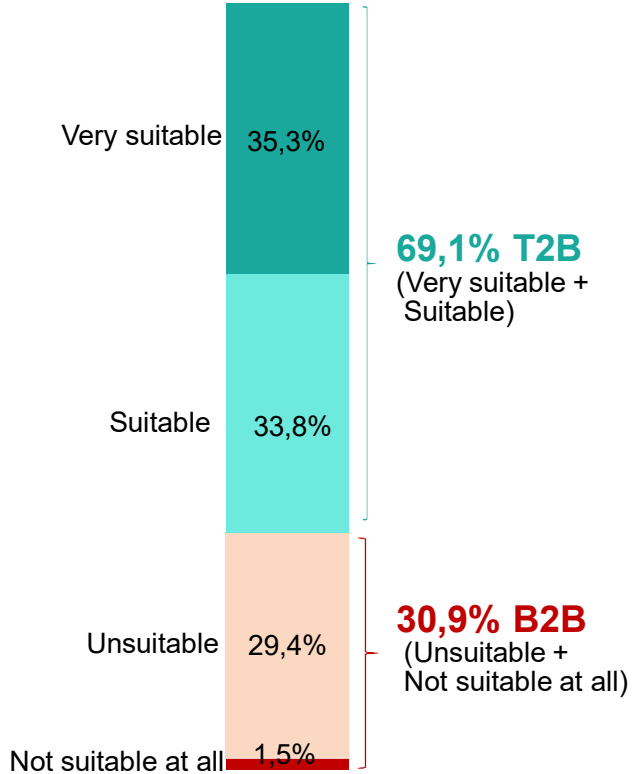
4. TRAINING CONTENTS
Training needs perception

Training needs in the area of functional deterioration, frailty and fall are…



Base: Total sample (n= 228)
Q.5 In your opinion, the training needs in functional deterioration, frailty and falls are….

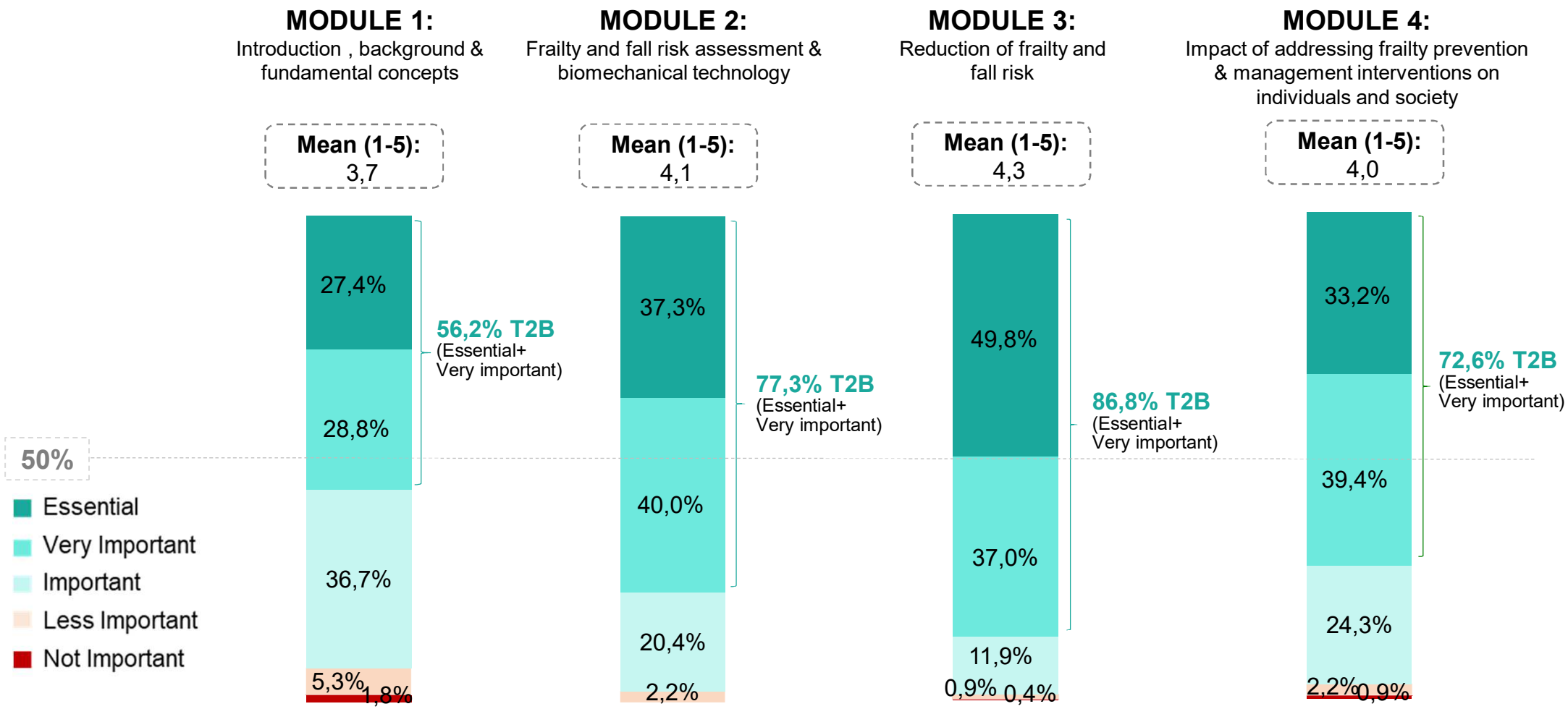
Training needs in the area of functional deterioration, frailty and fall **among respondents that received training in the area in the last 2 years:**



Base: Have received training in the area in the last 2 years (n= 68)

4. TRAINING CONTENTS

Modules: level of importance I



Base: Total sample (n= 228)

Q.12 Regarding the training contents modules listed below, please indicate level of importance of each module for a course focused on use of new biomechanical technologies to prevent functional decline, frailty and falls.

4. TRAINING CONTENTS

Modules: level of importance II

MODULE 1: Introduction , background & fundamental concepts

+

MODULE 2: Frailty and fall risk assessment & biomechanical technology

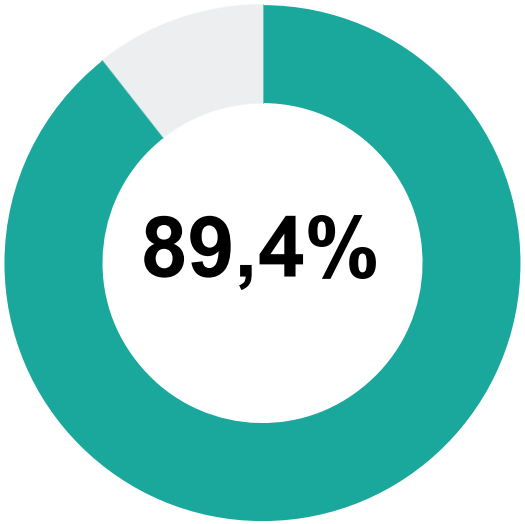
+

MODULE 3: Reduction of frailty and fall risk

+

MODULE 4: Impact of addressing frailty prevention & management interventions on individuals and society

Respondents that consider **ESSENTIAL + VERY IMPORTANT + IMPORTANT**
all modules



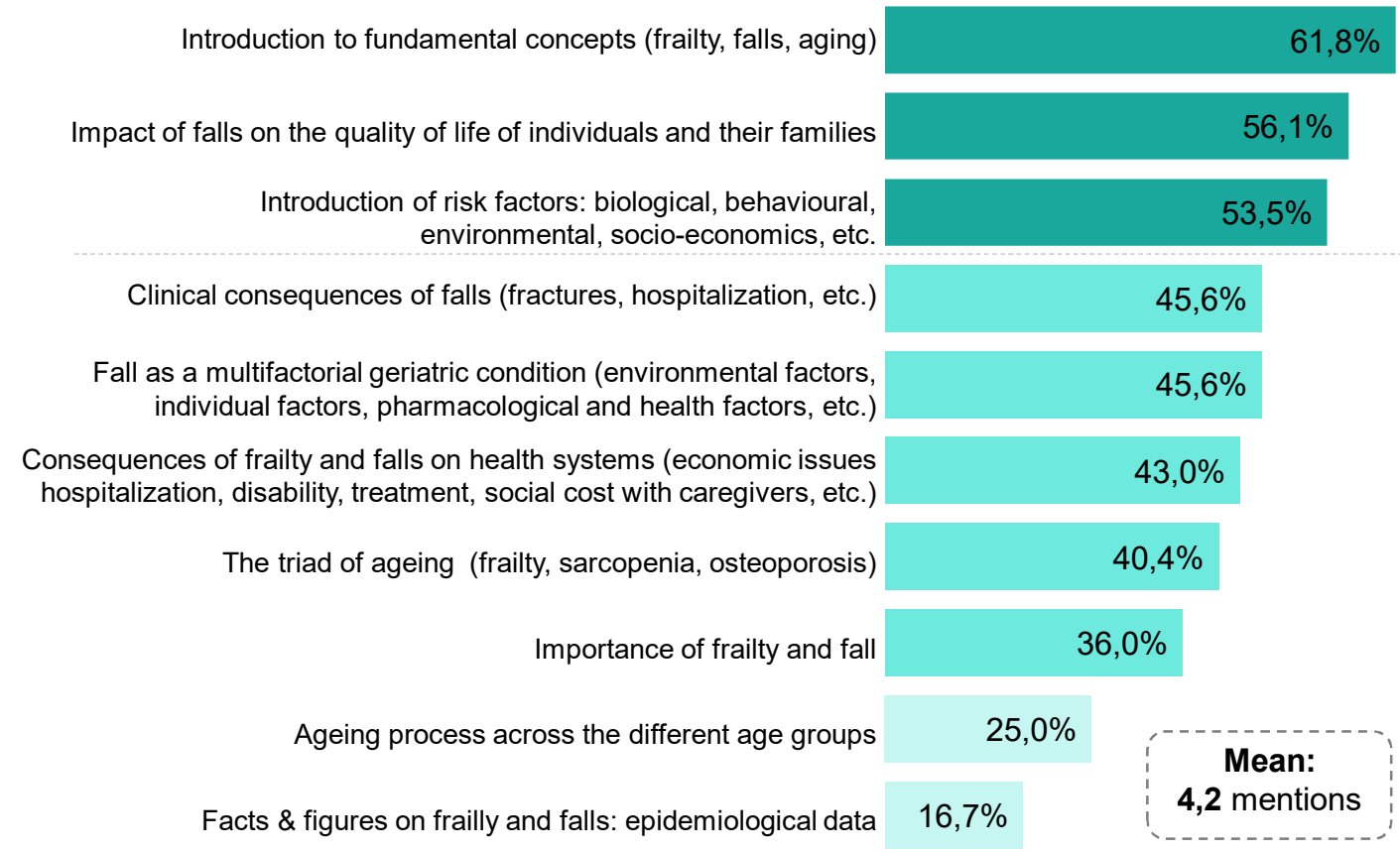
Base: Total sample (n= 228)

Q.12 Regarding the training contents modules listed below, please indicate level of importance of each module for a course focused on use of new biomechanical technologies to prevent functional decline, frailty and falls.

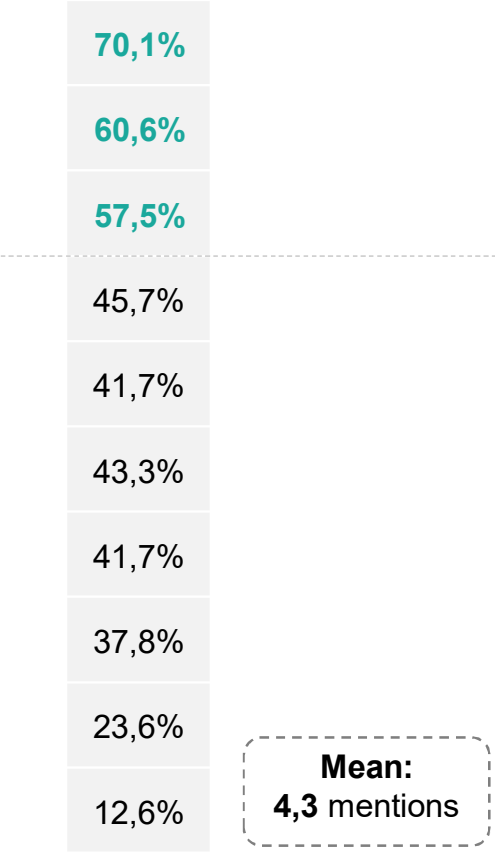
4. TRAINING CONTENTS
Module I: training contents interest

INTRODUCTION , BACKGROUND & FUNDAMENTAL CONCEPTS

Interest for the training contents to be consider in **Module 1**



What about respondents that consider **ESSENTIAL + VERY IMPORTANT (T2B)** Module 1?



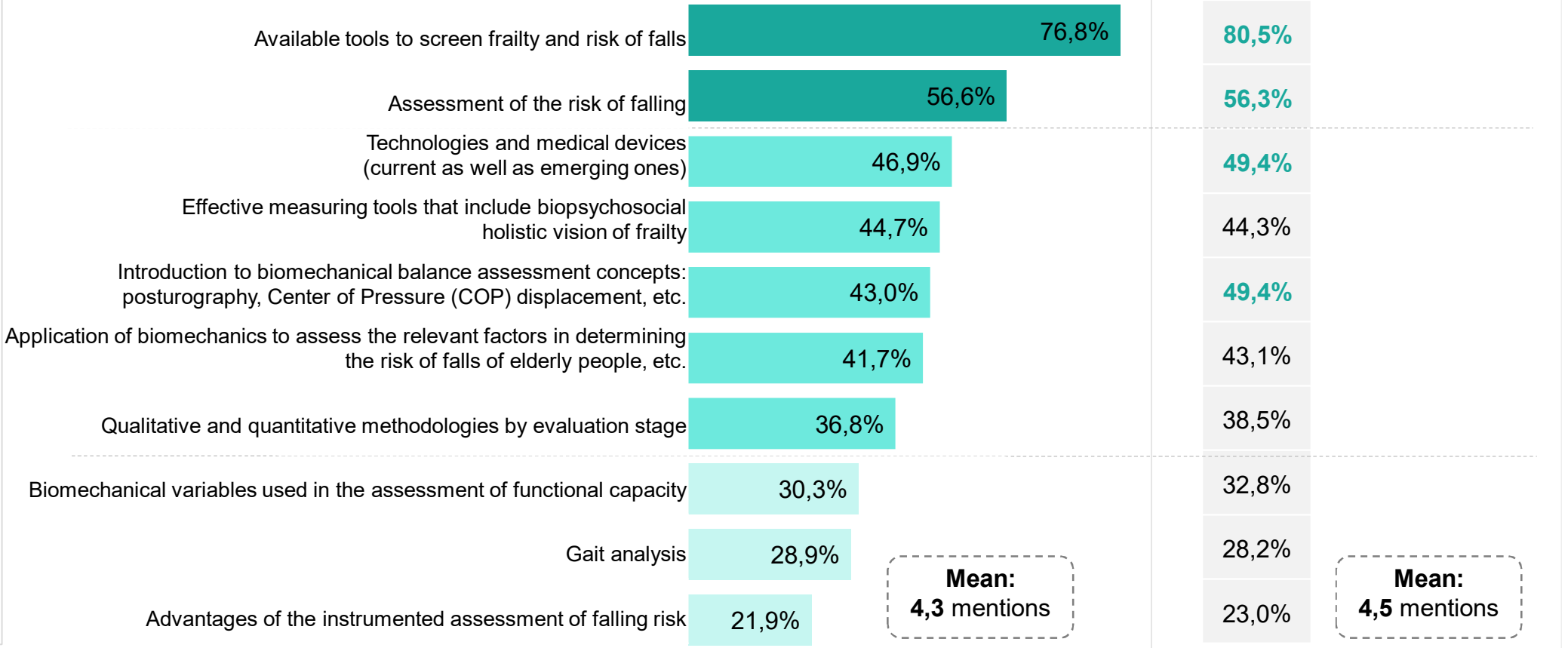
Base: Total sample (n= 228)

Q.13 From the following list, what training contents do you consider the most important to include in this module? (Select a minimum of 3 options and a maximum of 5 options).

4. TRAINING CONTENTS
Module II: training contents interest

FRAILTY AND FALL RISK ASSESSMENT & BIOMECHANICAL TECHNOLOGY

Interest for the training contents to be consider in **Module 2**



What about respondents that consider **ESSENTIAL + VERY IMPORTANT (T2B)** Module 2?

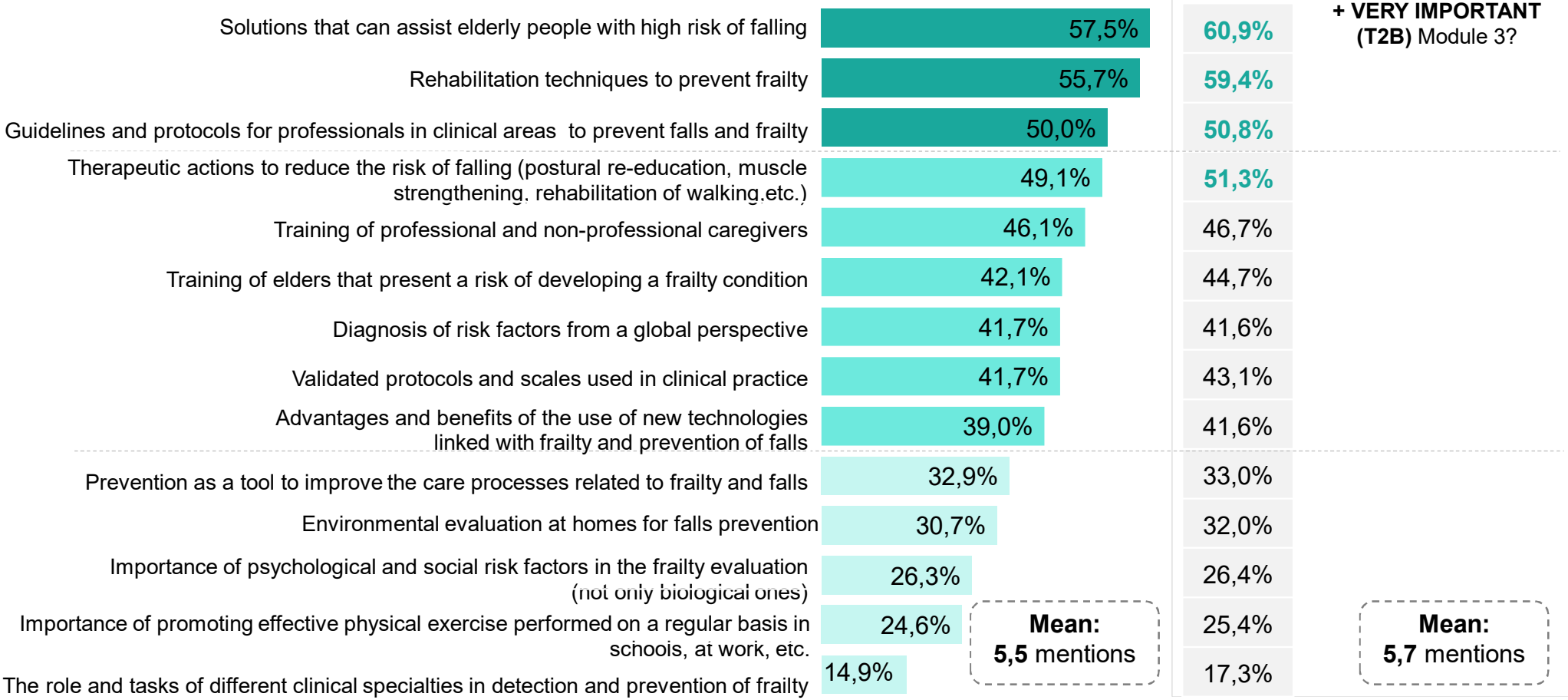
Base: Total sample (n= 228)

Q.14 From the following list, what training contents do you consider the most important to include in this module? (Select a minimum of 3 options and a maximum of 5 options).

4. TRAINING CONTENTS
Module III: training contents interest

REDUCTION OF FRAILTY AND FALL RISK

Interest for the training contents to be consider in **Module 3**



Base: Total sample (n= 228)

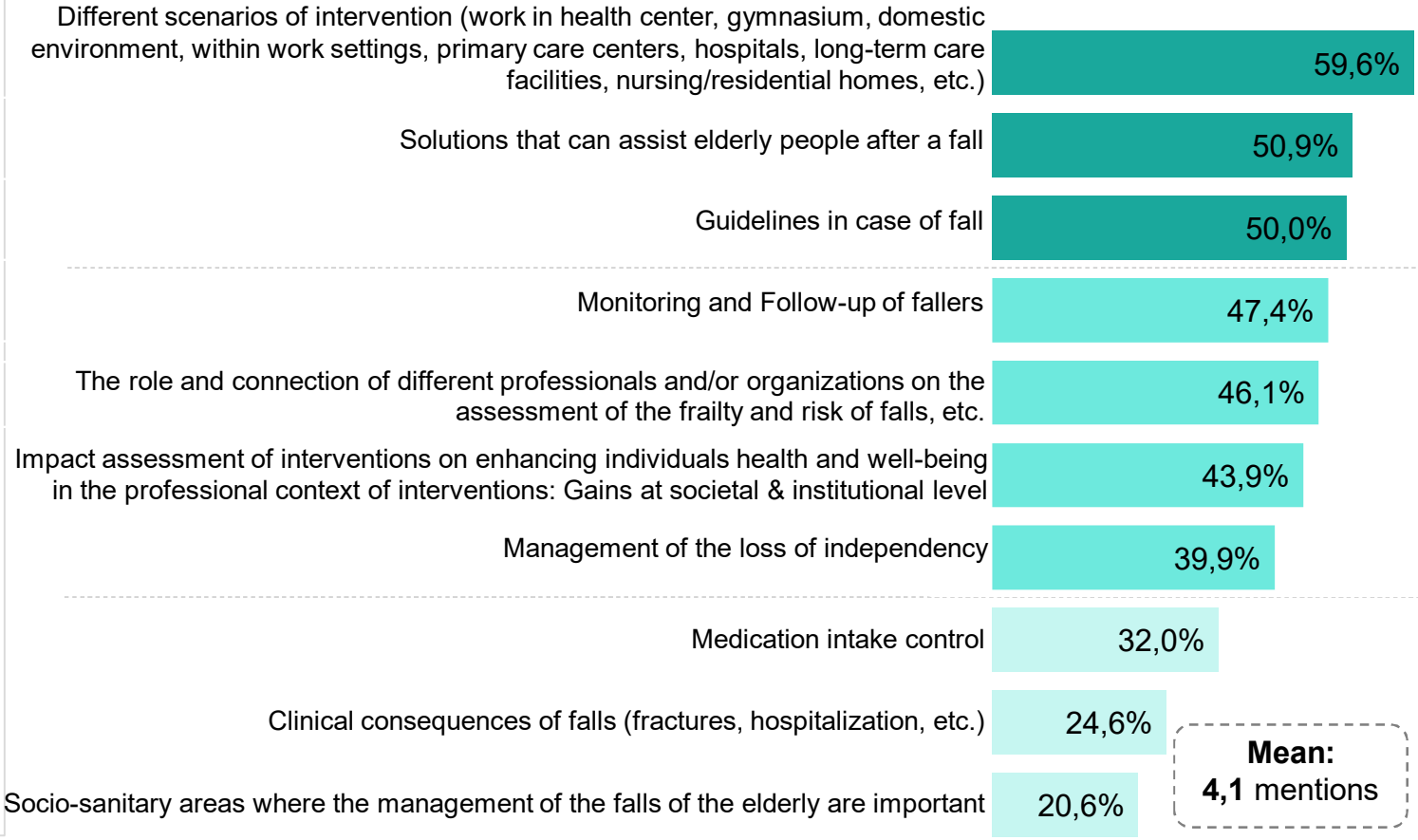
Q.15 From the following list, what training contents do you consider the most important to include in this module? (Select a minimum of 3 options and a maximum of 8 options).

4. TRAINING CONTENTS

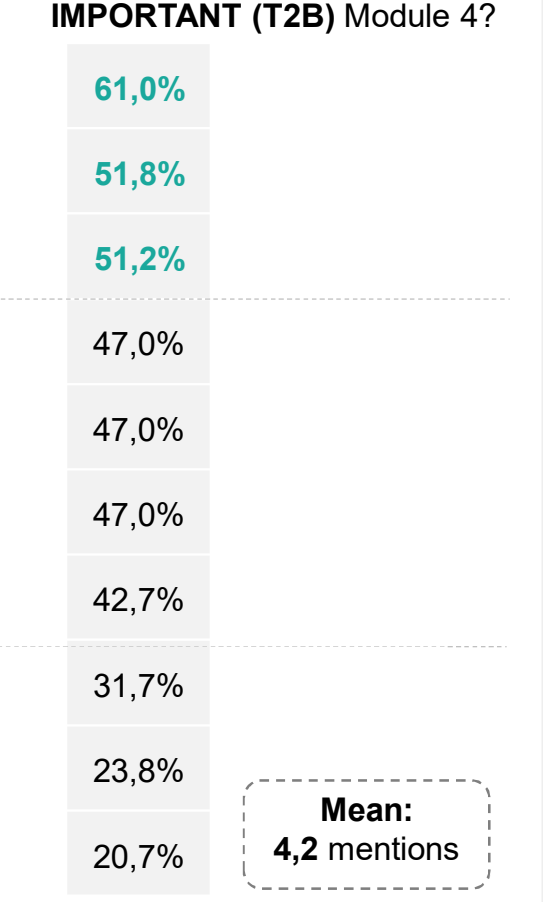
Module IV: training contents interest

IMPACT OF ADDRESSING FRAILTY PREVENTION & MANAGEMENT INTERVENTIONS ON INDIVIDUALS AND SOCIETY

Interest for the training contents to be consider in **Module 4**



What about respondents that consider **ESSENTIAL + VERY IMPORTANT (T2B)** Module 4?



Base: Total sample (n= 228)

Q.16 From the following list, what training contents do you consider the most important to include in this module? (Select a minimum of 3 options and a maximum of 5 options).

5. COURSE FEATURES

5. SUMMARY: COURSE FEATURES I

For more than 8 of 10 participants (85,4%) on-line teaching stands as a proper tool for training the use of new biomechanical technologies to prevent functional deterioration, frailty and falls as they consider it Very Suitable or Suitable.
Also **participants consider that course should be mainly available in Laptop (82,5% sample**). Although nearly 3 of 10 participants do consider that course should be available in all the options (laptop + smartphone + digital tablet).

Motivations for taking a training course related to the use of new biomechanical technologies to prevent functional deterioration, frailty and falls stand out the following ones as **the most important for more than 60% of respondents: Increase my general knowledge in this field (79,4%), Better serve my patients (75,9%) and Improve quality & efficiency of processes in my organization (62,3%).**

Regarding the most important training requirements for a course focused in the use of new biomechanical technologies to prevent functional decline, frailty and falls **highlight the following ones with a rate superior to 50%** of total sample: **Contents focused on practice (57,3%) and Applicability to clinical practice (51,3%).**

Have **all the training modules available** as you create your online account is **the prefer accessibility option for 55,6%** of respondents.

High interest in performing a pre-test (self-evaluation test) about the contents of the training module **before starting each module**, where **nearly 8 of 10 participants (75,9%) declare that they would like to have it.**

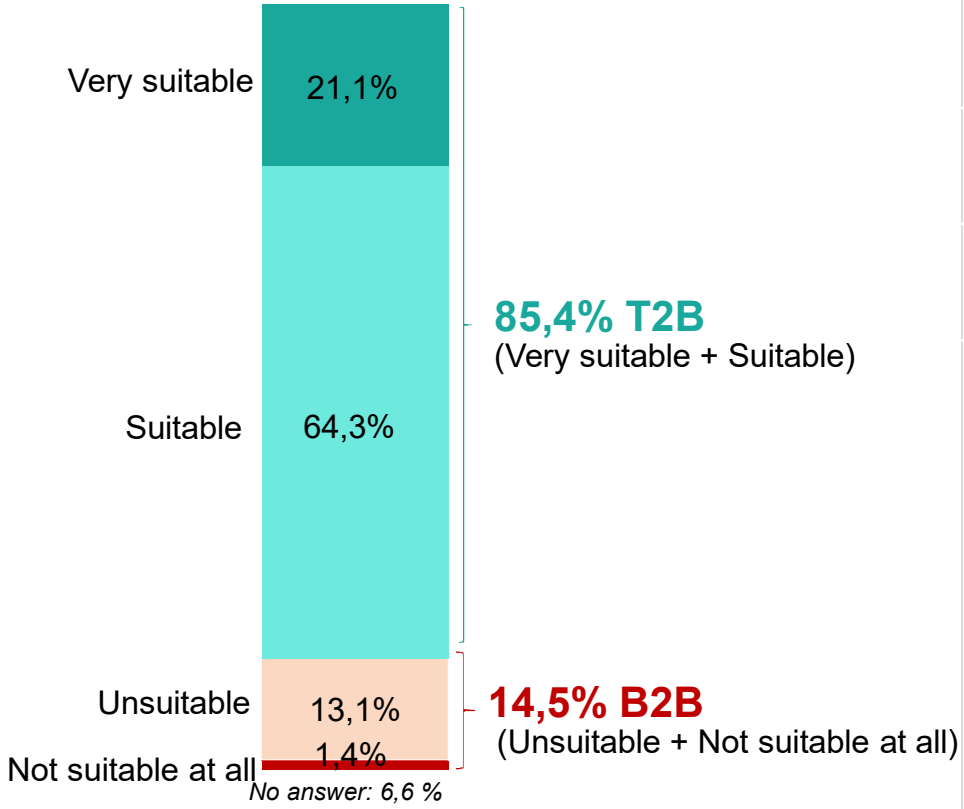
5. SUMMARY: COURSE FEATURES II

Nearly 5 of 10 participants (45,2%) consider between 20 and 49 hours adequate hours of training focused in the use of new biomechanical technologies to prevent functional decline, frailty and falls **in in a year period.**

Regarding **specific time dedicated to devote to a training/study session**, the option of **1 hour is the one with more interest, with 33,8% of respondents considering this time the optimal one**. On a second level of interest stands out the option of 30 minutes with a rate of 28,5%.

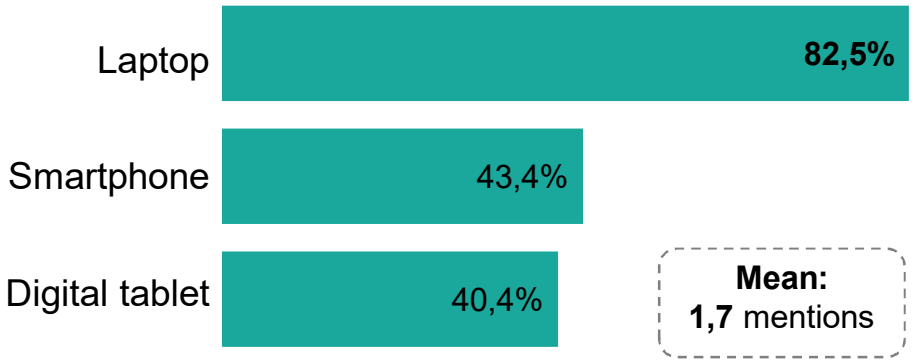
5. COURSE FEATURES
On-line acceptance and accessibility

On-line teaching as a tool for training the use of new biomechanical technologies to prevent functional deterioration, frailty and falls **is…**

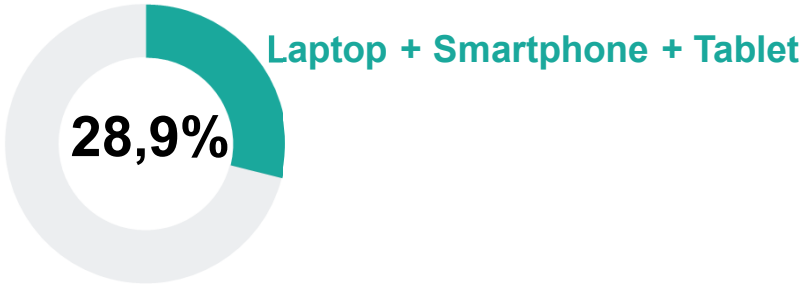


Base: Total sample (n= 228)
Q.17 Do you consider on-line teaching a proper tool for training the use of new biomechanical technologies to prevent functional deterioration, frailty and falls?

The on-line course should be available on…



Respondents that selected all 3 options:

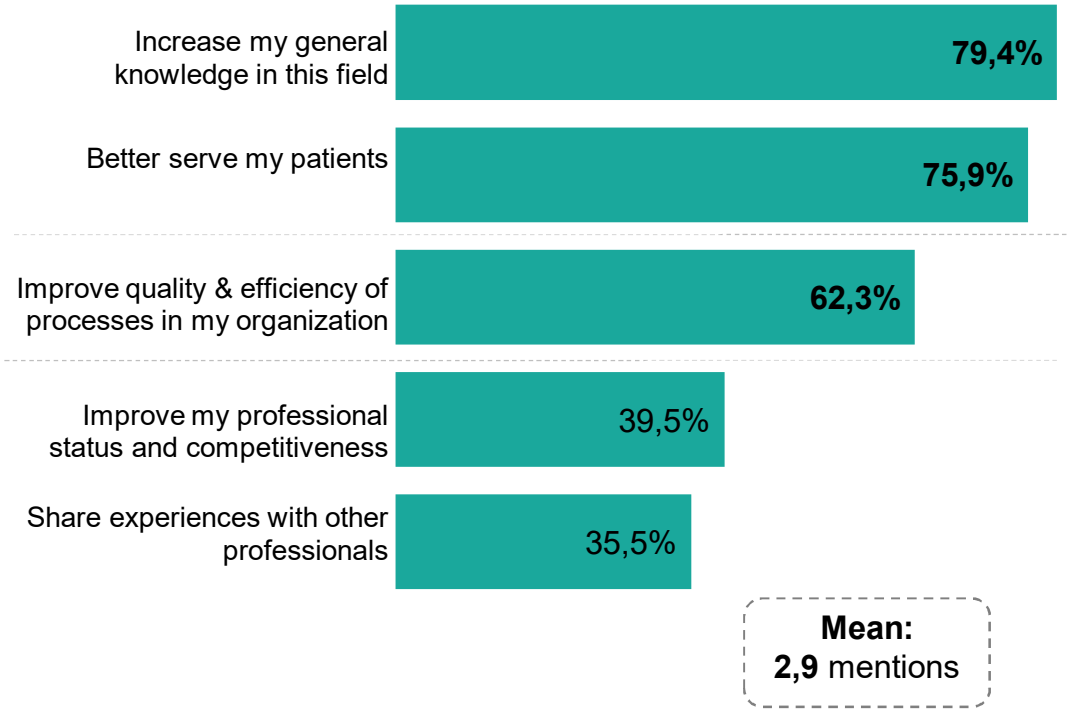


Base: Total sample (n= 228)
Q.21 The course should be available on…

5. COURSE FEATURES

Training requirements & motivations

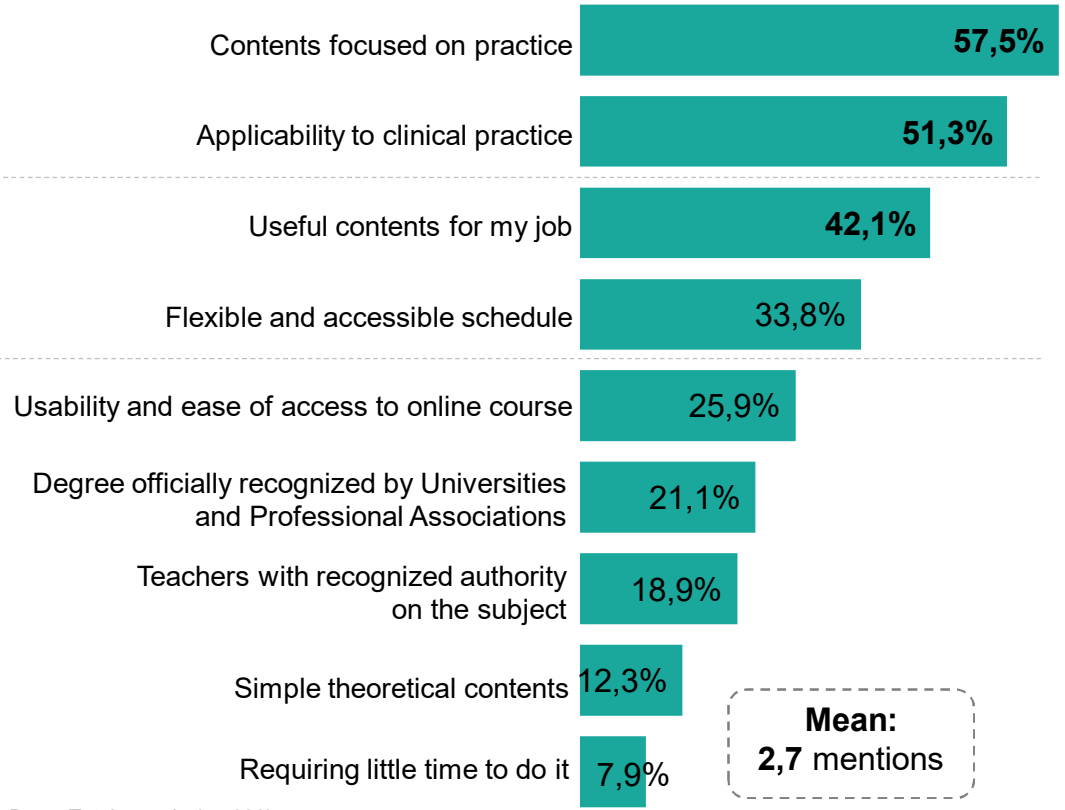
Motivations for taking a training course related to the use of new biomechanical technologies to prevent functional deterioration, frailty and falls are….



Base: Total sample (n= 228)

Q.18 What would be your motivation for taking a training course related to the use of new biomechanical technologies to prevent functional deterioration, frailty and falls? (select at least 3 motivations)

The most important training requirements for a course focused in the use of new biomechanical technologies to prevent functional decline, frailty and falls are….



Base: Total sample (n= 228)

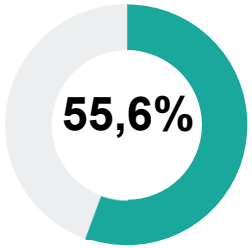
Q.19 What type of training requirements do you consider the most important for a course focused in the use of new biomechanical technologies to prevent functional decline, frailty and falls? (select up to 3 requirements)

5. COURSE FEATURES

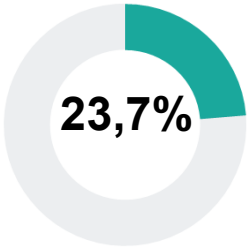
Contents accessibility & pre-test interest

Regarding the **accessibility of the training contents**, respondents **would prefer to…**

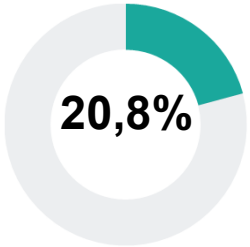
Have **all the training modules available** as you create your online account



Have **only the first training module available** and have to follow the entire module to make the other module available



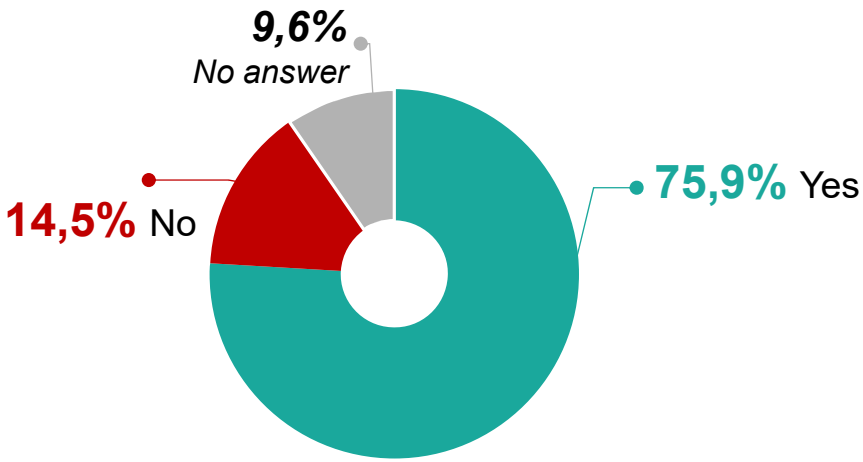
Have **only the first training module available with a GO/NOGO** evaluation performed at the end of the training module to make the other module available.



No answer: 6,6 %

Base: Total sample (n= 228)
Q.23 Regarding the accessibility of the training contents, would you prefer to…

Interest in performing a pre-test (self-evaluation test) about the contents of the training module **before starting each module**?

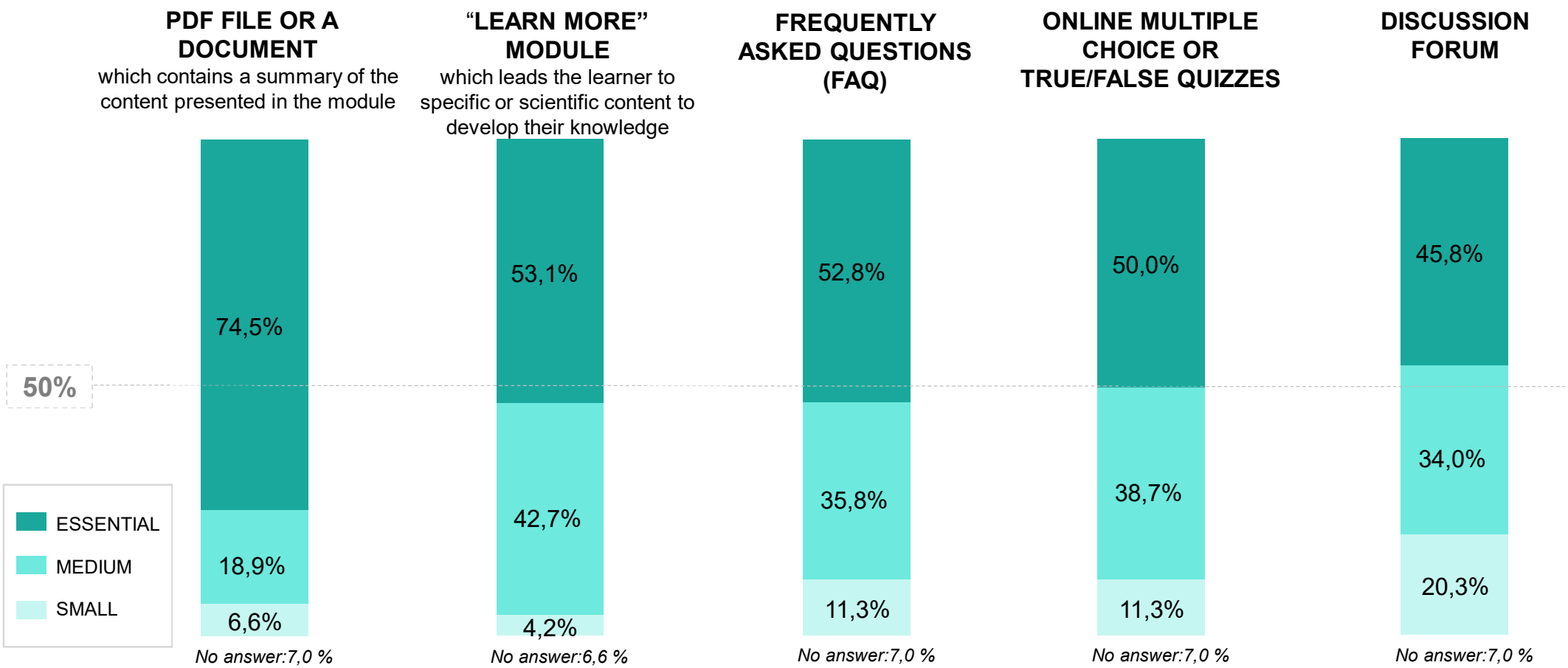


Base: Total sample (n= 228)
Q.24 Before starting a training module, would you appreciate to perform a self-evaluation test to assess your knowledge or know-how about the contents of the training module?

5. COURSE FEATURES

Complementary contents interest

Level of interest in….



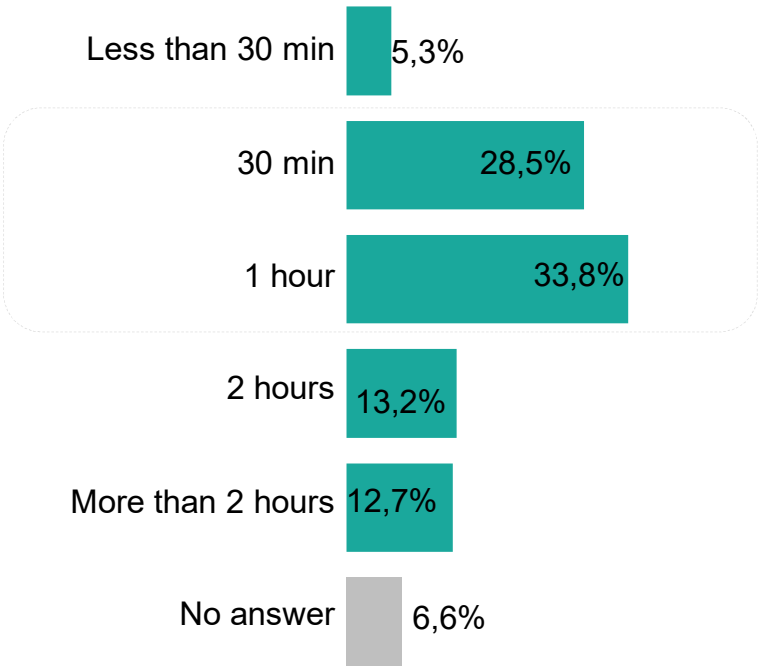
Base: Total sample (n= 228)

Q.22 Regarding the training contents of the course previously mentioned, please specify in each case the level of importance for you to have access to the following contents.

5. COURSE FEATURES

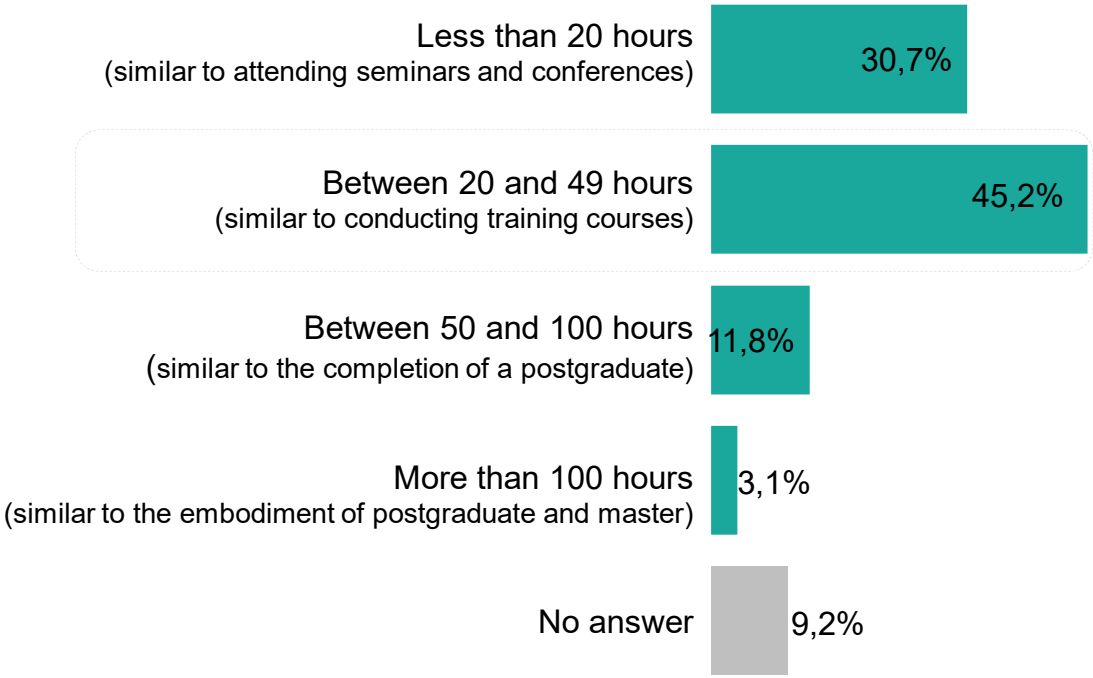
Training time dedication

How much time to devote to a training/study session?



Base: Total sample (n= 228)
Q.20 How much time will you spend in total to devote to a training/study session? Keep in mind that the course will be divided into different modules and each module into different sessions.

Adequate hours of training focused in the use of new biomechanical technologies to prevent functional decline, frailty and falls **in in a year period** are…



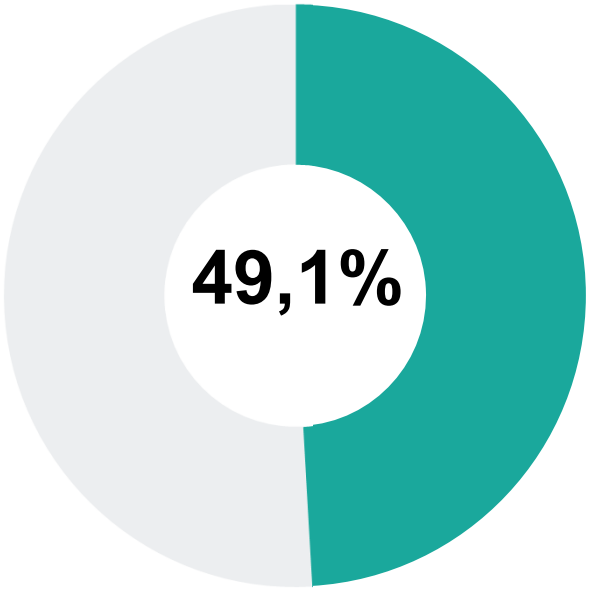
Base: Total sample (n= 228)
Q.26 Please specify how many hours of training in this field do you consider are adequate in a year period for a professional of your characteristics

6. OTHER ISSUES OF INTEREST

6. OTHER ISSUES OF INTEREST

Interest in receiving extra info for the course

Respondents that let their mail because they are **interested**, after completing the questionnaire, **in having additional information be updated in information regarding the course….**



Base: Total sample (n= 228)
Q.30 In case you are interested in having additional information, please introduce your mail to receive updates

6. OTHER ISSUES OF INTEREST

Additional comments at end of survey

I consider to be a various and intertwined multidisciplinary topics appropriately to the societal contemporary problems and general practitioners' needs of improvements.
Conflicts of interest must be identified, especially with industry.
Please add in the contents video.
A certificate would be useful.
Even if it is an on-line course, it should have a face-to-face part based on practice. In my opinion, you can't learn to use technology if you don't handle it, touch it, see it.
It is very important that the course has a practical part, but that it can be done at a distance.
It is important to distinguish the area of disability or functional decline, common to any population and attributable to different causes (prolonged bedding, surgery, stays in ICU, oncological disease and so on) with the area of fragility and risk of falls in elderly people. They are different concepts and in the area of rehabilitation one is widely known and controlled and the other not.
I believe the formation should extend to immobility syndrome. In Portugal (according to Pordata's 2017 data) we have 15.4 years of unhealthy life after the age of 65 - i.e. with movement limitations. This value does not deserve to be ignored.
Although I think that an online training would not give all the skills, it is a good start due to the lack of availability of professionals. I suggest that you work with the professional groups for such a project, giving more robustness. For example, the Physiotherapy in Aging Interest Group of the Portuguese Association of Physiotherapists.
Use a clearer title or themes and fewer technical concepts subject to different interpretations.
A self evaluation test should be made at the end of the module also, not also at the beginning.

Base: Total sample (n= 228)
Q.25 Add any comments you consider about the course

Fall in Age

Consortium:

U LISBOA | UNIVERSIDADE DE LISBOA

TÉCNICO LISBOA

MH

IBV INSTITUTO DE BIOMECÁNICA DE VALENCIA

INRCA Istituto di Ricovero e Cura a Carattere Scientifico

EUROPEAN GENERAL PRACTICE EGPRN RESEARCH NETWORK

Project Number:
2018-1-PT01-KA203-047343
Project Title:
"Innovative Training for Technology-based Frailty and Falls Management"

Erasmus+

This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.