HI3

HEALTH INNOVATION
IMPLEMENTATION AND IMPACT

A functional training program on how to implement sustainable change in the health care system on a clinical level

HANDBOOK

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Introduction

It is of paramount importance to support the development of relevant and high-quality skills and competences in combination with further strengthen key competences in VET in relation to health care. European healthcare systems show significant gaps in the provision of healthcare (Council of Europe, 2016). At the same time, our health care system is under considerable budgetary and societal strain (European Commission, 2017). To improve our provision of care, we need to devise a more efficient and sustainable healthcare system. Then it is essential to be able to implement change and monitoring the outcomes, and at the same time, numerous studies show that implementing the proposed changes in a health care setting remains fragmented, inconsistent and not efficient. Hence, there is a substantial need for the development of high-quality work-based VET in the healthcare sector that facilitates the process of implementing change in an efficient and structured way as well as being cost-efficient.

The need for ongoing training and development of health care professionals is highlighted in the Directive 2013/55/EU "Member States shall ensure, by encouraging continuous professional development, that health professionals are able to update their knowledge.. to maintain safe and effective practice". A key priority is the need to train healthcare professionals in how to implement change and monitoring the effect at clinical levels. The healthcare partners from Slovenia, Greece, Estonia, Latvia and Romania reports that they do not have the resources or training to enable them to address these issues adequately and they are therefore neglected.

The objectives of this project were to develop, test, implement and disseminate the developed training material for healthcare managers and healthcare professionals as well as students. A further objective was to produce a functional training programme, reflective of the sociocultural diversity across Europe. The project aimed to make the training material accessible to a broad range of stakeholders and will do so through multi-mode delivery accessible as open-resource.

The consortium consists of public health experts in change and implementation methodology (SE) and pedagogical experts in vocational training (NO) with an NGO (NL) that will incorporate the patient perspective. The hospitals (LT, EL, RO, SI, EE) will conduct a needs analysis of each partners' healthcare setting.

Introduction

The methodological approach and activities have generated the following results:

1. A functional and evaluated training material that is based upon research evidence and the needs analysis.

2. The training quickly have an impact through high-quality work-based VET that enhances service provision by addressing the need to create tools on how to implement and evaluate change in a structured way.

3. Health care organisations have access to continuing education and training (CVET) that will update their health professionals' knowledge in this area to maintain safe and effective practice

4. As prioritised by the European Commission, it is paramount to create a more sustainable health care system that can address that everyone has access to affordable, preventive and curative health care of good quality. This developed training course provides the tools on how to implement and monitor these changes for all patient groups, including those that are at risk for social exclusion and poverty.

5. The training is economically viable to implement and be able to reach a large group of members of health staff or NGO's. This is due to the methodological design of concrete and focused 1-day training course that emphasis on addressing knowledge and skill deficits in this area.

The long term benefits will be that staff/students in the health care sector and NGOs will receive training that will directly enhance their skillset and as a consequence will facilitate better health care provision for their intended target groups and in the same way, make the health care system more efficient with better implementation strategies that can ensure that improvement in healthcare provision will be more successful. This will then result in that patients will receive improved timely access to affordable, preventive and curative health care of good quality. Individuals that also belong to socially disadvantaged groups will also benefit since the training will address the particular circumstances that need to be considered when implementing change in order to avoid unintentional marginalisation. The project has raised a European awareness of these aspects, which adheres to the established priorities of the European Commission (European Commission Communication 'European Disability Strategy 2010-2020: A Renewed Commitment to a Barrier-Free Europe', November 2010; European Commission Communication 'The European Platform against Poverty and Social Exclusion', December 2010).

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The Project Partnership

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The Project Partnership

The consortium covers a wide geographical and social dimension: Partners come from Sweden, the Netherlands, Norway, Estonia, Greece, Latvia, Slovenia and Romania. The consortium includes a combination of "players" in Research, Health Care, NGO and VET, bringing into the project a variety of necessary high-level complementary skills. The partnership is built up with organisations possessing extensive national and European level knowledge, networks and experience on the project's focus. The coordinator (SE) and the Norwegian partner, particularly in terms of key staff involved, has the theme of the project as its main focus and they know all other partners, and they have successfully cooperated in various European initiatives before delivering projects with outstanding quality and outputs reflected in the final assessment rating. In the partnership, there is a highly experienced research and knowledge mobilisation partner that has extensive VET experience (NO), Health Care providers (EE, EL, LV, SI) and NGO's (NL, RO). The responsibilities in the partnership have been divided according to the expertise of partner organisations to guarantee the best possible implementation of the project. The main role of the dissemination and target partners is to test the developed course in practical level together with their staff to ensure strong end-user engagement in the project and maintaining the cooperation after the project's lifespan. All the partners have experience in the transnational cooperation and EU projects, and they are used to working in international networks and initiatives and are committed to contributing to the project as a group. The NGO from the Netherlands has a strong network for dissemination across 40 countries and with organisations such as UNICEF and Reproductive Health and Research at WHO. At the same time, all other partners have an extensive national and international network as well as they belong to the COST Action CA16234 with access to dissemination to 25 countries and 50 institutions. The recipient countries (Estonia, Greece, Latvia, Slovenia and Romania) are highly motivated to incorporate the outcome of the project since it will directly improve training, lead to better health care provision and at the same time contest segregation and discrimination that currently unintentionally occurs in the health care sector.

The European Qualification Framework (EQF)

The European Qualification Framework (EQF) aims to increase the transparency of qualifications throughout Europe. It provides a common European translation tool that facilitates the comparison of several thousands of different qualifications issued all over Europe. This European reference framework consists of eight levels that are defined according to so-called 'learning outcomes' – that is to say with reference to the knowledge, skills and competences acquired. EU Member States can relate the levels of their national qualifications to the eight common reference levels. Using this tool, stakeholders abroad can make an assessment as to the level of knowledge, skills and competences that a qualification holder has acquired.

EQF LEVEL	KNOWLEDGE	SKILLS	COMPETENCE
	In the context of EQF, knowledge is described as theoretical and/or factual.	In the context of EQF, skills are described as cognitive (involving the use of logical, intuitive and creative thinking), and practical (involving manual dexterity and the use of methods, materials, tools and instruments)	In the context of EQF, competence is described in terms of responsibility and autonomy.
LEVEL 4 – HI3	Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities

Adapted from: https://ec.europa.eu/ploteus/content/descriptors-page

HI3 TRAINING PROGRAM

In his work, R.M. Harden (2002b) considers the utilization of learning outcomes for creating a kind of educational model suitable for training of healthcare professionals. Learning outcomes should be defined so that they can cover the whole range of necessary competencies and put the focus on the integration of various competencies into medical practice. Graphically Harden's model of learning outcomes looks like a complex of three circles placed one into another. In the inner circle, there are seven learning outcomes related to what a doctor (healthcare practitioner) can do, meaning his/her expected technical competencies ("to do a demanded thing"). In the middle circle, there are learning outcomes associated with how exactly a doctor (healthcare professional) performs a professional task: with knowledge and comprehension, with appropriate attitude and strategy of decision-making ("to do a manipulation correctly and carefully").

The outer circle includes learning outcomes characterizing the continuous professional development of a healthcare practitioner as a specialist and as a personality ("the right man does this") *(Harden, 2002b)*.

When writing learning outcomes for a module/program, the minimally appropriate level that a student has to master for getting credit should be described. Therefore, better to have a limited number of the most important learning outcomes rather than having a huge number of secondary ones.

Another important thing in writing learning outcomes is that they should be connected with educational activity and assessment process.
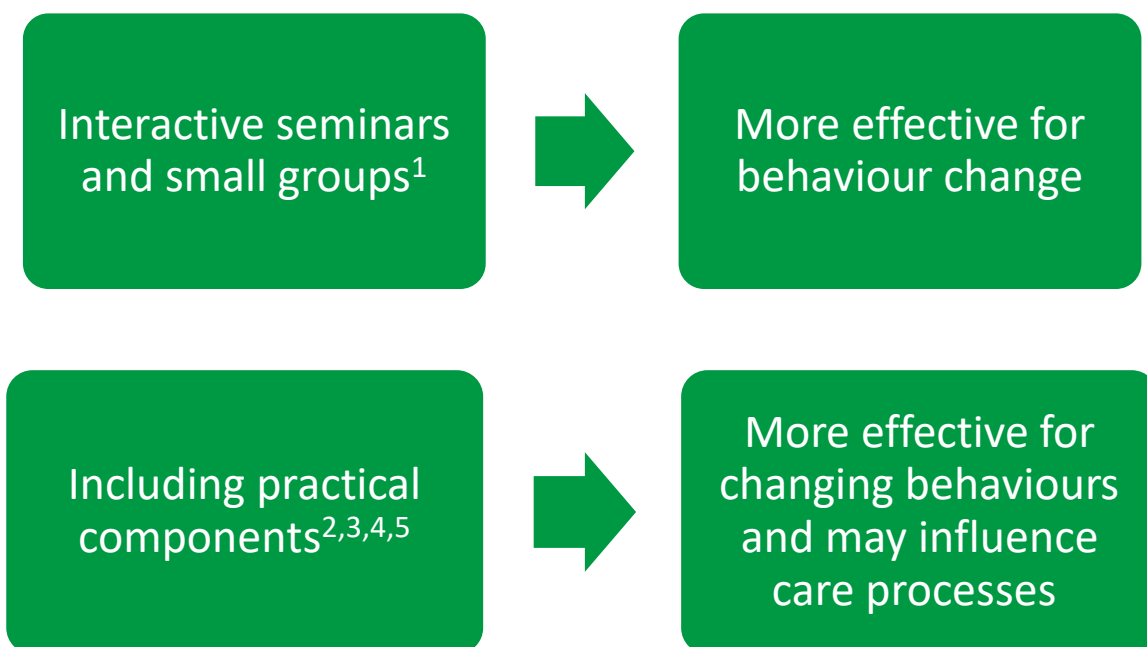
The developed HI3 Training program has factored in these pedagogical aspects, and the program consists of an introductory session, four training modules, which includes theoretical knowledge, case studies and practical exercises. The learning outcomes are adopted to meet the content of each module in relation to knowledge, skills and competences as described in relation to the objectives of EFQ at level 4.

Harden R.M. Learning outcomes and instructional objectives: is there a difference? *Medical Teacher*. (2002b); 24(2): 151-155.

Didactic principles

The HI3 program is also based upon research evidence on how to facilitate the best possible learning environment for healthcare professionals. The developed material follows for example the following points.

Interactive seminars and small groups[1]	More effective for behaviour change
Including practical components[2,3,4,5]	More effective for changing behaviours and may influence care processes

1. Thomson O'Brien MA, Freemantle N, Oxman AD et al. Continuing education meetings and workshops: Effects on professional practice and health care outcomes.Cochrane Database of Systematic Reviews,2002.
2. Mazmanian PE, Davis DA, Galbraith R. Continuing medical education effect on clinical outcomes: effectiveness of continuing medical education: American College of Chest Physicians Evidence-Based Educational Guidelines.Chest2009;135(3 Suppl):49S-55S.
3. Tess AV, Yang JJ, Smith CC et al. Combining clinical microsystems and an experiential quality improvement curriculum to improve residency education in internal medicine.Acad Med2009;84(3):326-334.
4. Oyler J, Vinci L, Arora V, Johnson J. Teaching internal medicine residents quality improvement techniques using the ABIM's practice improvement modules.J Gen Intern Med2008;23(7):927-930.
5. Tomolo AM, Lawrence RH, Aron DC. A case study of translating ACGME practice-based learning and improvement requirements into reality: systems quality improvement projects as the key component to a comprehensive curriculum.Postgrad Med J2009;85(1008):530-537.

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Learning outcomes

Module 1

- Knowledge of the theoretical framework around innovation

- Understand the need for innovation

- How to apply innovation in practical settings

- Familiar with methods developed for innovative efforts

Module 2

- Understand the process of transition

- Understand the difference between extrinsic motivation and intrinsic motivation

- Explain the four step model

- Understand the theory of change model

Module 3

- Understand how barriers influence implementation

- How to identify barriers

- Give example on "factors to consider"

- Give example of leadership skills

Module 4

- What is Utilisation–Focused Outcomes Framework

- Explain what "SMARTER" goals are

- Explain logic framework model

- Explain why evaluation is important

- Give examples of different evaluation models

Evaluation

The project included a purpose-designed pre and post KAPb test[1,2,3]. This evaluation questionnaire was developed to measure the participants' levels of knowledge before and after the training. It covers the three dimensions - Knowledge, Attitudes and Practice behaviour in relation to EQF level 4. The project team undertook the following stages of development:

   Step 1: Defining the objectives of the survey

   Step 2: Developing the key questions.

   Step 3: Designing the survey & conducting pre-testing prior to finalizing the questionnaire together with all the partners.

   Step 4: Implementing the KAPb survey for the participants in the pilot training. Participants rate their knowledge on a scale of 1 to 10 (where 1=not at all confident and 10=very confident).
   (see website: health-innovation.nu/resources).

11. I understand the theory of change model

1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○

   Step 5: Analysing the data by using a T-test for paired samples[4]

   Step 6: Use the data to discuss how to implement the training modules..

1. World Health Organization. Advocacy, communication and social mobilization for TB control: a guide to developing knowledge, attitude and practice surveys. World Health Organization; 2008.
2. Witzke AK, Bucher L, Collins M, et al. Research needs assessment: nurses' knowledge, attitudes, and practices related to research. J Nurses Staff Dev.2008;24(1):12-18; quiz 19-20.
3. Zhang S, Pan J, Wang Z. A cross-sectional survey to evaluate knowledge, attitude and practice (KAP) regarding measles vaccination among ethnic minorities. Ethn Dis.2015;25(1):98-103.
4. https://libguides.library.kent.edu/SPSS/PairedSamplestTest

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Delivery of training

- Partners delivered the 1-day HI3 training course in 5 countries.
  - September 2019 – January 2020.
- Quantitative indicator of project objectives: "Number of people trained in the developed course"
  - Estonia = 11
  - Latvia = 25
  - Romania = 29
  - Greece = 36
  - **Total = 101 healthcare professionals and other relevant stakeholders**

KAPb Pre -Post scores

KAPb Pre - 3 months score

Legend: Pre (yellow), 3 months (green)
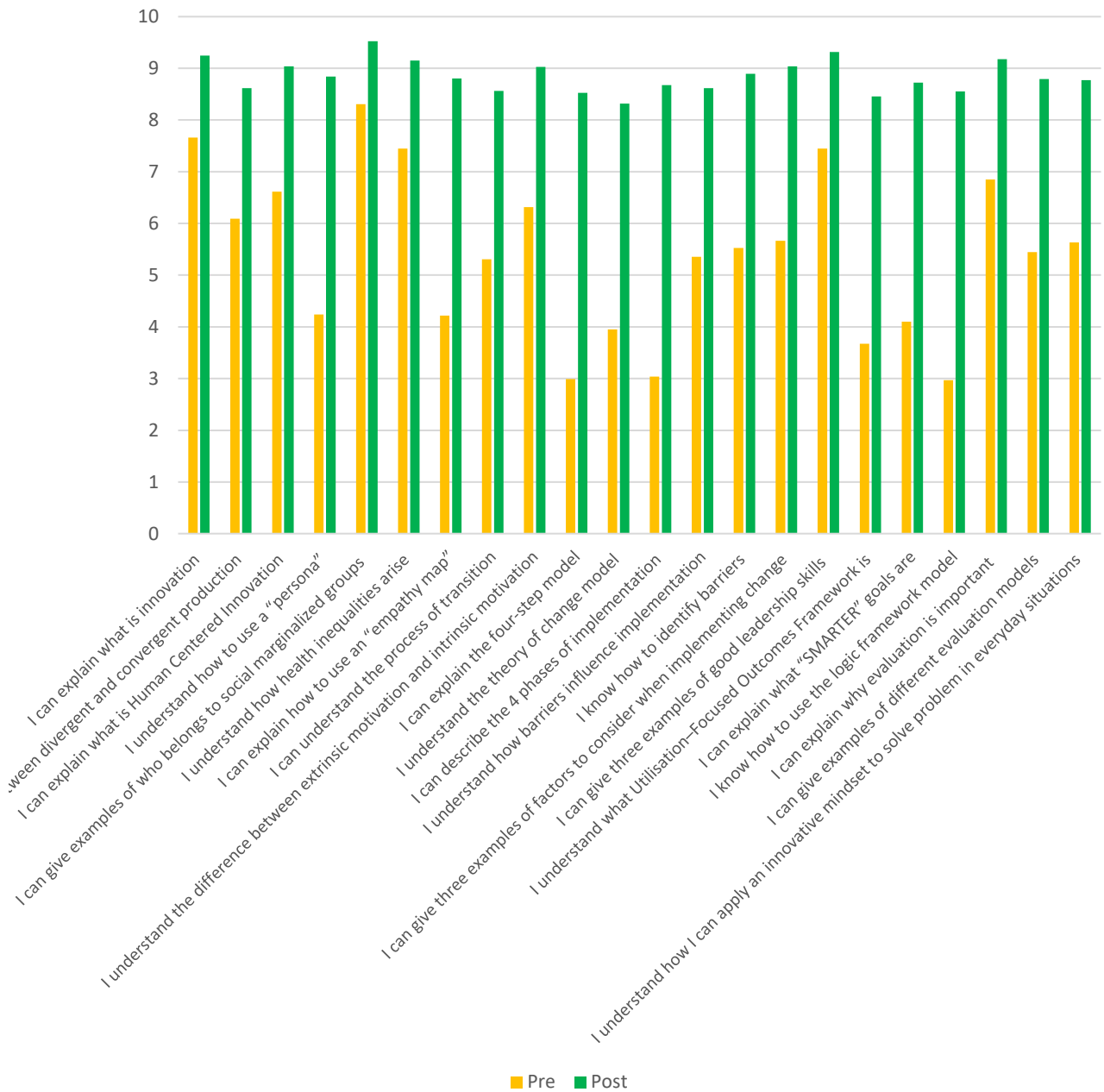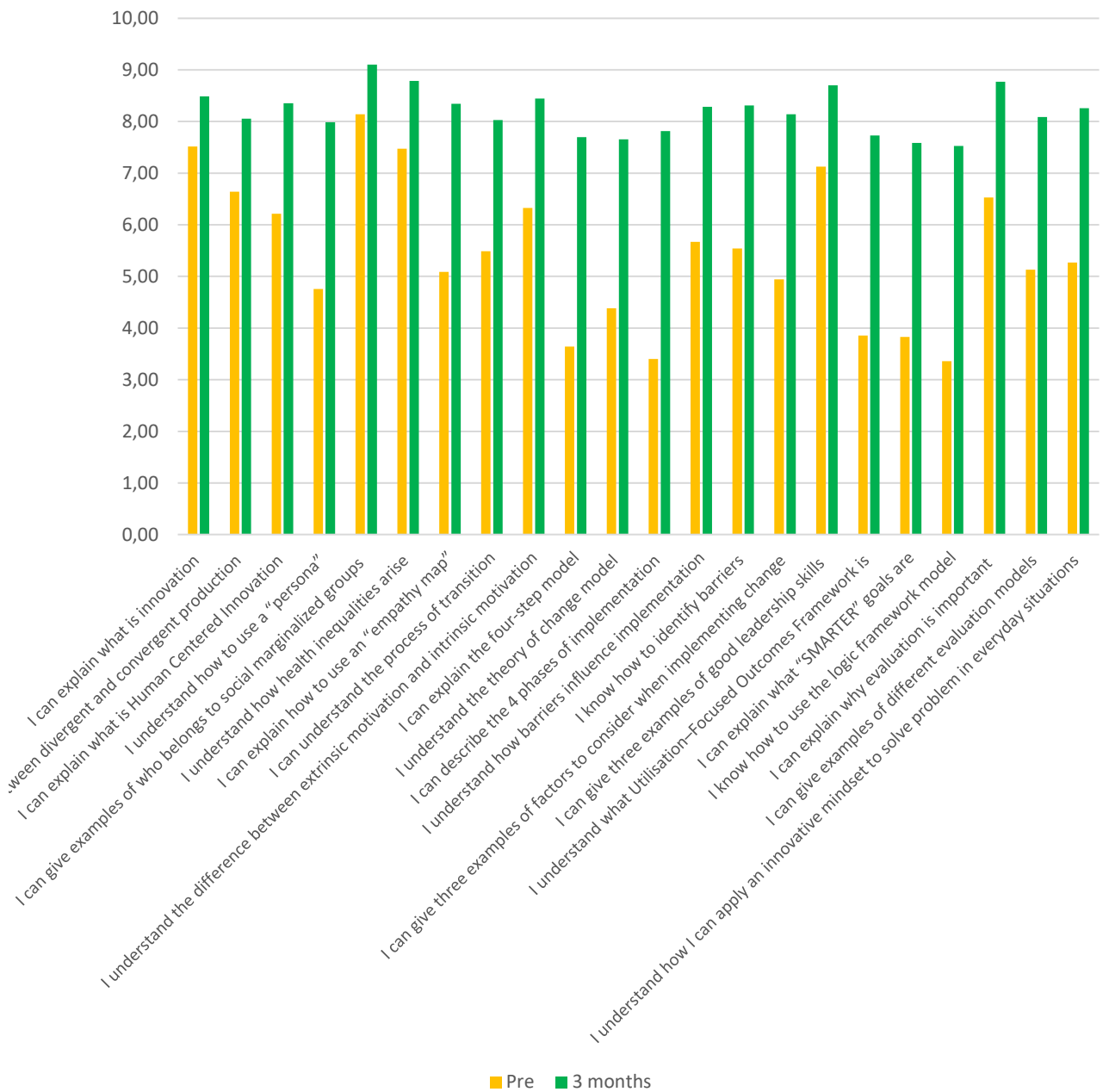
Results

- All t-tests show significant increase in knowledge / confidence between:
  - o Pre and post-survey scores
  - o Pre and follow-up survey scores

Didactic Guidelines

Instructions for Trainers & Facilitators delivering the HI3 Training Modules

This section provides information for trainers and facilitators on how to use the HI3 Training modules in the context of providing training for staff in health care and NGO settings.

Options for Implementing the Modules

Training can employ all the modules, or a selection of modules. They can be delivered in the context of:

- Half day course
- One day training course
- Two day training course
- Self directed learning

For the training courses it is recommended that the number of participants should be between 4-24.

Teaching facilities

Facilities conducive to interactive teaching and discussion, for example

- U-shaped table
- Chairs and tables for small groups (5-6), or round tables for bigger groups
- Flipchart & markers
- Notepads & pens
- PowerPoint projection facilities
- Enough space to break out in small groups

Didactic Guidelines

Trainer preparation

The trainer should prepare examples relevant to their own experience and to the context of the participants in the training. They should also develop a teaching plan that includes:

- A warm-up exercise
- Orientation to the content of the module(s)
- Time for group discussions & exercises
- Encouragement to participants to contribute examples from their own practice
- Printed material
- KAP Test
  - Pre & Post evaluation of the training day
- An opportunity for reflective self-evaluation (for the trainer & trainees)
  - Reflect on what the trainer has learned during the HI3 Training day & ways of encouraging their trainees to do the same
  - Consider how they can use their newly acquired knowledge in their own practice and ways of encouraging trainees to do the same
- Scheduling coffee breaks and lunch

Didactic Guidelines

Self directed learning

- Allow 8-12 hours to read and consider the materials on the project website, including
    - National reports
    - HI3 Theoretical Report
    - HI3 Pedagogical Report
    - HI3 Training Curriculum
- After completing each module (including the exercises)
    - Consider whether and how you could apply your new knowledge in your practice
- Reflect on your own experience in relation to the course content
- Reconsider the material again after further experience in practice

Didactic Guidelines

Half day course

- Based on 2 selected modules
- Number of participants 4-24
- Teaching methods used:
    - Interactive lectures, small group discussion, discussions in pairs

One day training course (see suggested outlines below)

- Duration of the course 8 hours (including breaks and lunch)
- Suggested number of participants 10 – 24
- Possible teaching methods:
    - Interactive lectures, small group discussion, discussions in pairs, analysis of case studies,

Didactic Guidelines

HI3 Training Day (example)	
8:00 – 8:30	WELCOME & INTRODUCTION
8:30 – 8:45	KAP TEST – PRE EVALUATION
8:45 – 10:00	MODULE 1
10:00 – 10:15	COFFEE BREAK
10:15 – 11:30	MODULE 2
11:30 – 12:45	MODULE 3
12:45 – 13:45	LUNCH
13:45 – 14:30	MODULE 4
14:30 – 15:00	COFFEE BREAK
15:00 – 16:00	REFLECTIVE DISCUSSION ABOUT THE TRAINING IN RELATION TO THE PARTICIPANTS' WORKPLACES
16:00 – 16:30	KAP TEST – POST EVALUATION
16:30 – 17:00	WRAP UP

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