



Instructor Study

Strength and Weakness of the EFB

Identification for Improvement

Edition notice**Authors**

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Introduction

The aim of this research was to evaluate instructors of the European Fitness Badge (EFB). Generally, the main goal of the evaluation was to collect information on the development of the project. Through this, the current status can be proven: how many instructors have been educated so far, how many of those actually execute the EFB, as well as reasons for not executing the badge. By doing so, a judgment was possible to be made regarding the extent to which the programme has been implemented as planned. In addition, the needs of the instructors can be assessed. This will help improving the badge as well as provide communication options in the future development of the EFB. For this purpose, a questionnaire was developed and used to collect data of the perception of the EFB test in the certified instructors.

It was of interest to find out not only what worked well, but also possible problems which occurred during the test procedure or the execution in general. This information will help improving the badge by knowing which aspects need to be improved and further developed. The test procedure is clearly stated and described in the manual and during training seminar, however, since counselling is very individual it is a more complex process. One can assume that instructors have the biggest struggle with this component of the European Fitness Badge, even though the manual gives helpful advices and support and other material, like the Counselling Guide and Counselling Video was developed.

In order to know in which setting the badge was mostly conducted, it was necessary to ask in which situations they executed the test. This allowed us to identify settings in which the badge is hardly used. This information can help provide more support for these settings and new projects can be developed in order to increase the implementation and execution in those situations. Not only the settings in which the badge is used was of interest, but also whether the companies in each setting record an increase in members.

One aim of the European Fitness Badge is to motivate and support people to change their lifestyle so that they are healthier and more active. Since the instructors are directly in contact with the participants, they can assess if the badge is helpful to encourage and to motivate people to do more for their fitness and improve their lifestyle. Subsequently, one can ask about the usefulness of the European Fitness Badge to raise the awareness of the test participants on the importance of fitness and activity.

Considering this, some of the research leading questions are:

- What do instructors think about the usage of the test?
- Which problems occurred while executing the two test profiles? Are there differences between the execution of the two profiles?
- Are the suggestions for counselling helpful? Following are questions regarding the setting:
- In which situation was the EFB executed?
- Is the badge helpful for bringing new members in the sports clubs or fitness centers? Following are questions regarding the test participants:
- Is the badge helpful to encourage people to do more for their fitness?
- Is the badge helpful to motivate people to do more for their fitness?
- Is the badge helpful for test participants to increase the awareness for the importance of fitness?
- Is the badge helpful in the process of building up fitness in training groups?

Description of the sample

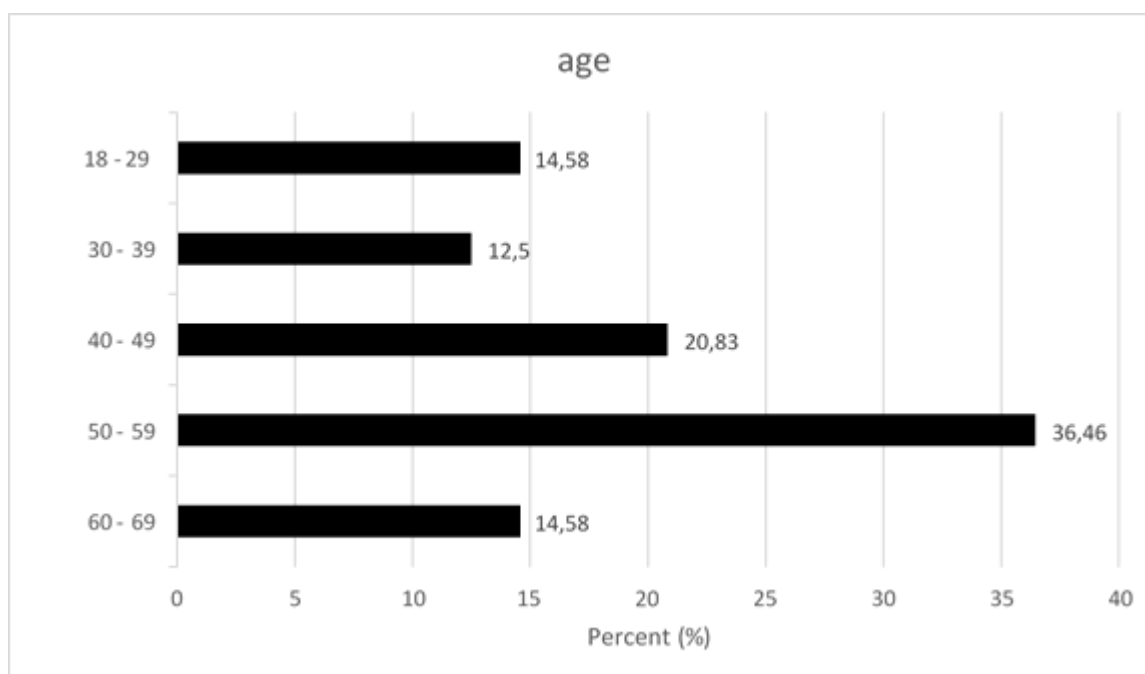
The questionnaire was shared to all project partners and they were requested to provide detailed information on the amount of instructors certified in their countries. By doing so, the study population could be calculated. The project partners answered via an e-mail and provided the following numbers: Austria sent the link of the survey to 50 instructors and three multipliers; Denmark contacted 45 instructors; Bulgaria contacted 10 instructors; Slovenia sent it to 5 instructors and the DTB in Germany sent a link with a Google Docs file listing the numbers for each state. In Germany, a total of 234 instructors were educated until the end of January 2019. Overall, this is a study population of 347 people.

From this total of reach out, a total of 96 questionnaires were able to be analysed. This is equivalent to 27,66% participation of the total study population.

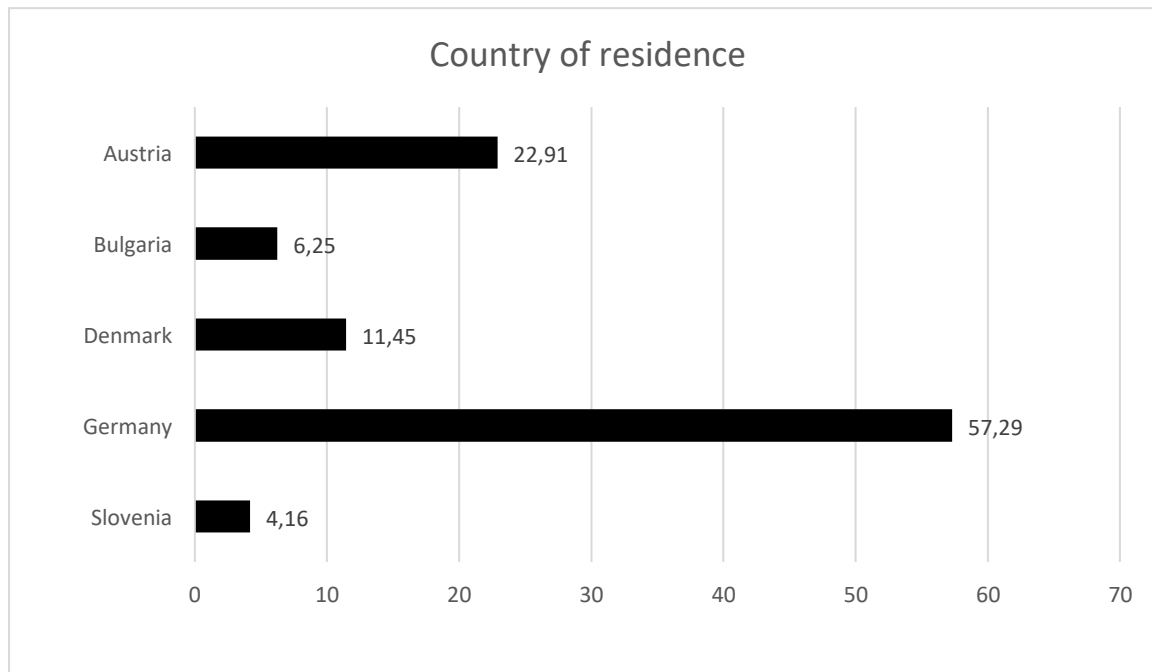
In order to calculate the response rate for each country, the percentage for each country is calculated. For this, the number of the study population of each country, as well as the actual number of participants of each country, are relevant. This results in the following return rates: 41,51% for Austria, 24,44% for Denmark, 60% for Bulgaria, 80% for Slovenia, and 22,65% for Germany.

Most of the participants – 69,79% – are female (n=67). The other 30,21% of participants are male (n=29).

Figure 1 shows the age of the instructors who participated in this survey. The participants are between 18 and 68 years old. The mean value is 46,59 years. 14,58% are between 18 and 29 years old (n=14). 12,5% are between 30 and 39 years old (n=12). 20,83% of the instructors are between 40 and 49 years old (n=20). Most of the participants of this survey – 36,46% – are between 50 and 59 years old. 14,58% which represents the group of the oldest participants, are between 60 and 69 years old (n=14).



As Figure 2 shows the nationality of the participants. Majority of them – 57,29% – lives in Germany (n=53). 22,91% of the participants lives in Austria (n=22), and 11,45% in Denmark (n=11). 6,25% participants live in Bulgaria (n=6) and 4,16% of the participants live in Slovenia (n=4)



The question about the current occupation was designed as a multiple naming question. Figure 3 outlines that currently 32,29% of the instructors are white collar workers (n=31). The answers “public official” and “self-employed” are ticked by 23,96% (n=23). The two categories “non-working” and “student” are named by 11,45% participants (n=11). 6,25% of the participants are managers or directors (n=6). 3,13% of the participants are trainees (n=3). 2,08% of the participants are unemployed or job seeking (n=2). In addition to this, 1,04% of the participants ticked “blue collar worker” (n=1).



The educational background and qualification in sports differs between the participants of the survey, which is shown in Figure 4. 50% of the participants were educated to be an instructor in sports clubs (n=48). 13,54% trained to be a fitness instructor (n=13). 9,64% have a Bachelor's degree in sports (n=9). 7,29% have a diploma or state examination to be a teacher in sports (n=7). 6,25% stated that they did an apprenticeship in sports (n=6). Another 6,25% have a licence in physical therapy or in occupational therapy (n=6). 4,17% do not have an education in sports (n=4). 2,08% have a Master's degree in sports (n=2).

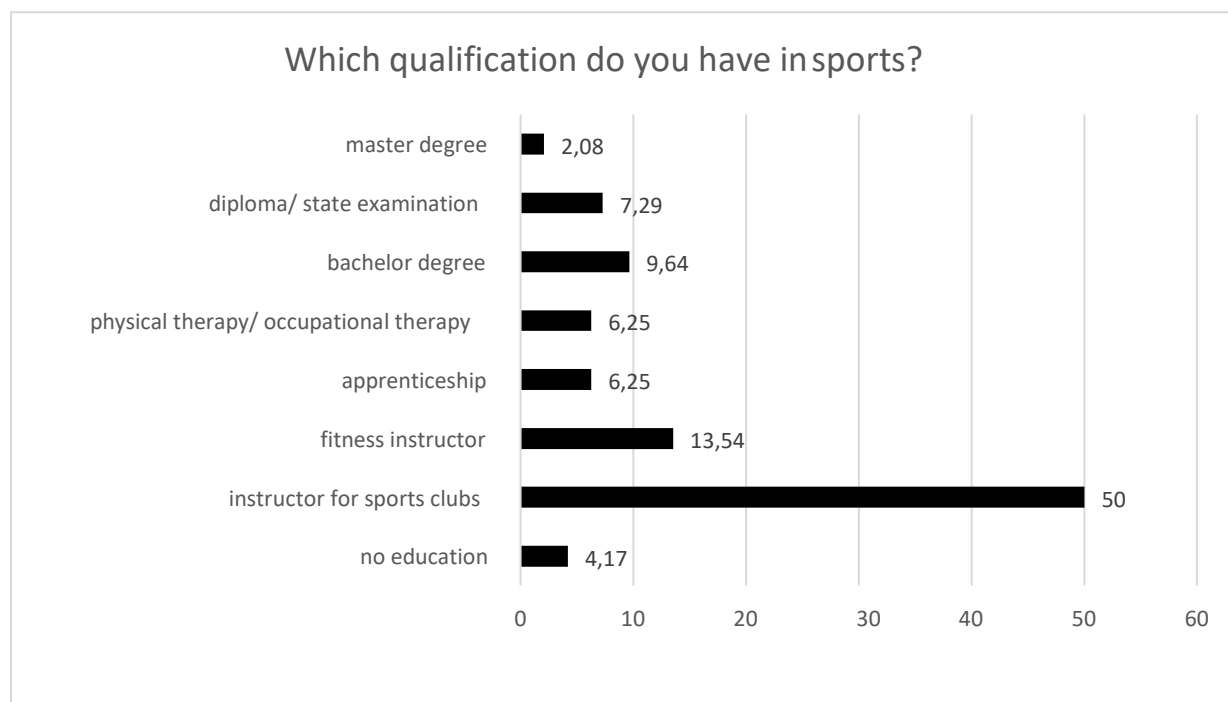
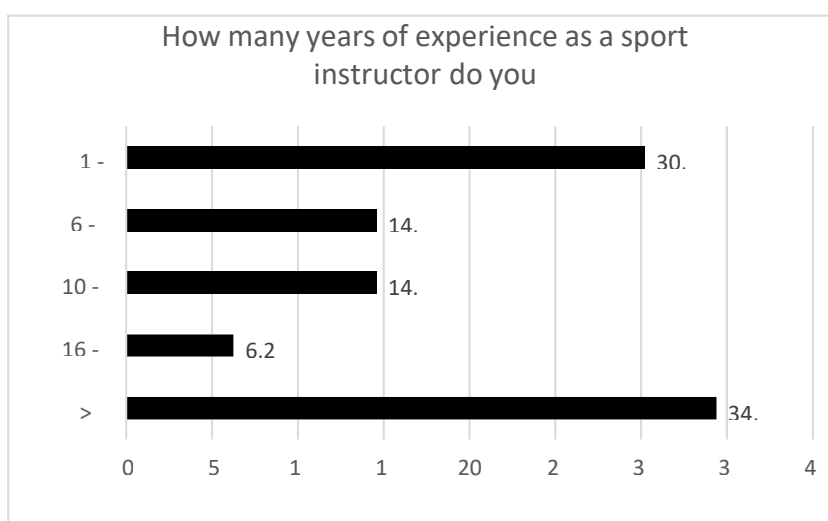
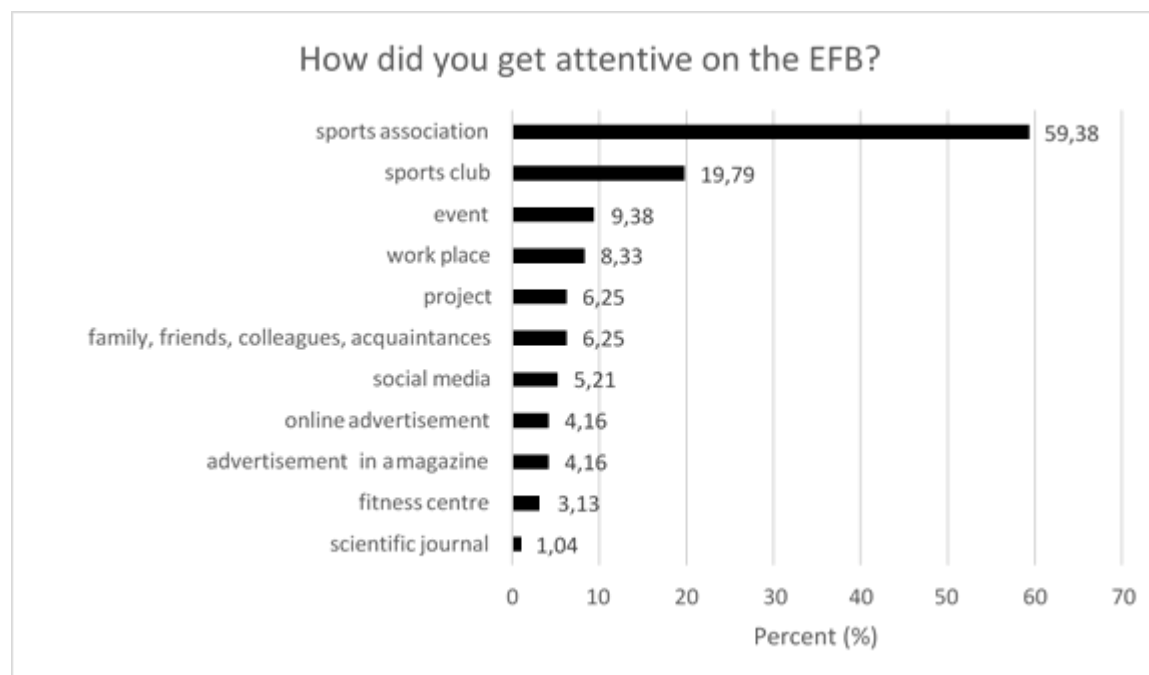


Figure 5 presents how many years of experience the participants have as a sports instructor. 30,21% have between one and five years of experience (n=29). 14,58% of the participants state that they have between six and ten years of experience (n=14). 14,58% have between ten and 15 years of experience (n=14). The least ticked answer is 16 to 20 years of experience with 6,25% (n=6). 34,38% have more than 20 years of experience as a sports instructor (n=33).



As shown in Figure 6, there are different ways in which the instructors got to know the EFB. This is a multiple naming question and majority of the instructors, 59,38%, got attentive through a sports association (n=57). 19,79% got did it through a sports club (n=19). 9,38% through a big event (n=9), 8,33% through their work place (n=8) and 6,25% through a project (n=6). Another 6,25% got to know the EFB through family, friends, colleagues, or acquaintances (n=6) and 5,21% did it through social media (n=5). A total of 8,33% got attentive through advertisements: 4,16% through an online advertisement (n=4) and another 4,16% through an advertisement in a magazine (n=4). 3,13% got attentive through a fitness centre (n=3) and 1,04% through a scientific journal (n=1). One participant wrote in the additional text field that he or she got to know EFB through University, but does not state whether it was project-related or within a class



Of the given study population, 60,42% executed to EFB so far (n=58). This also means that 39,58% did not yet execute the EFB (n=38).

The 39,58% which did not yet execute the EFB were asked to give reasons as to why they did not yet execute the EFB with the possibility to choose one or more options. The reasons named most often as seen in Figure 7 were “no group to do it with” with 28,95% (n=11), as well as “not enough time for execution” with 28,95% (n=11), and “too much organization” with 28,95% (n=11). The category “not enough time for preparation” is chosen by 21,05% (n=8). “Lack of volunteers to assist during the tests” is named by 18,42% (n=7). “Missing test materials” as well as “EFB does not fit in the class/program” are each chosen by 13,16% (n=5). 7,89% stated that “missing test materials” are the reason for not executing the EFB (n=3). Again, 7,89% say that they do not know how to execute the EFB (n=3). The least named reason is “no suitable location” with 5,26% (n=2). One participant states in the extra text field that he or she is planning to execute it in summer 2019. Another person wrote that he or she is not involved in the sports club anymore, as he or she used to.

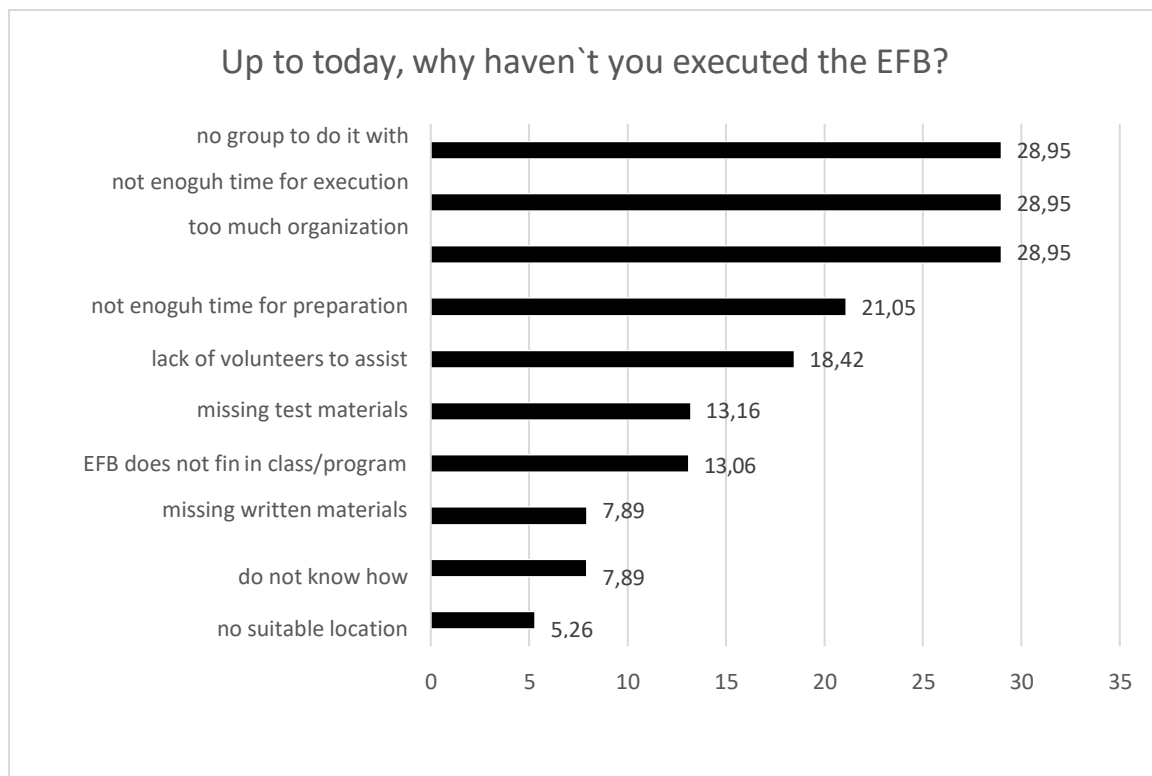
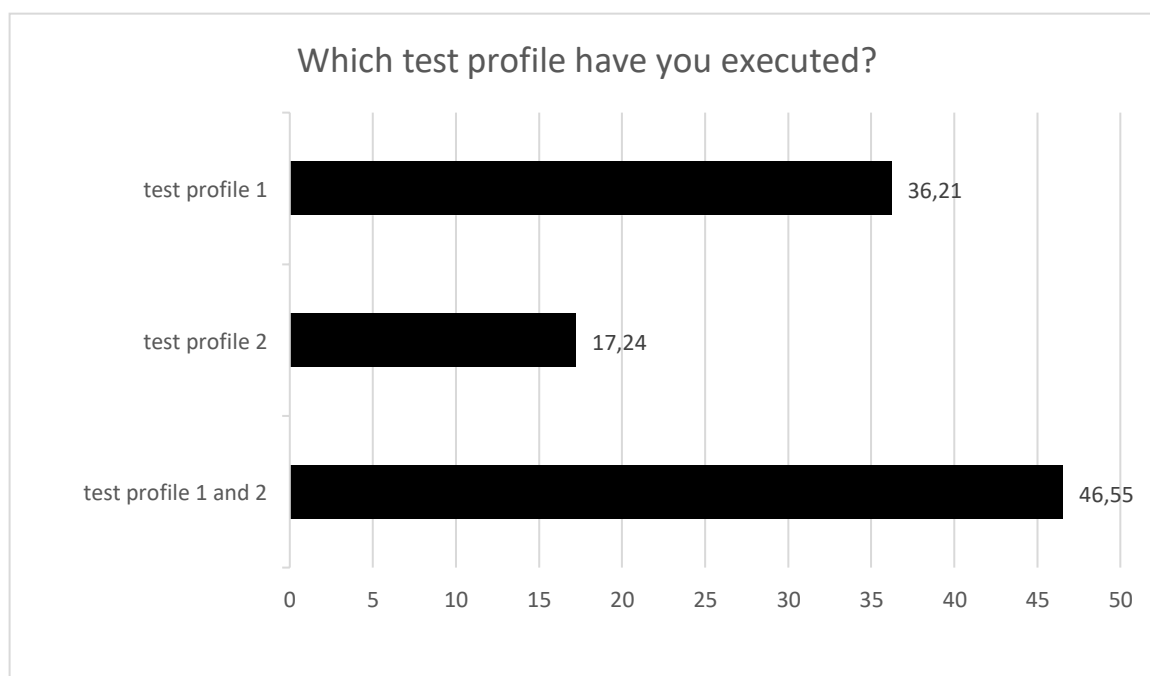
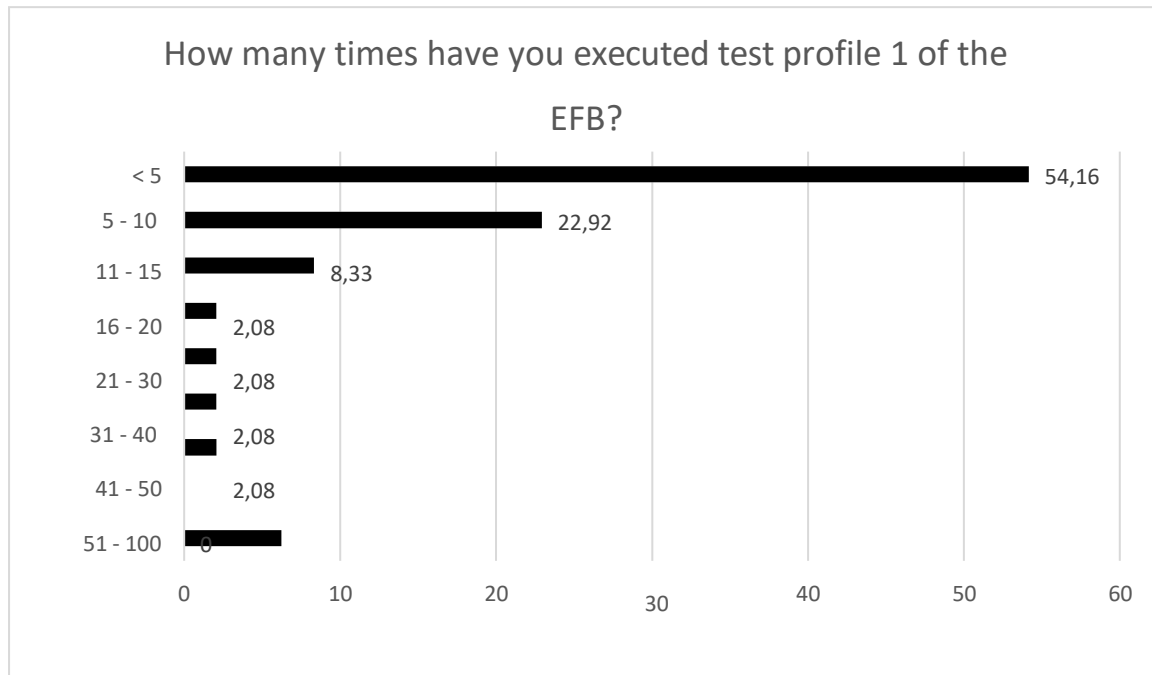


Figure 8 illustrates which test profile was performed by how many instructors of those who have executed the EFB. 36,21% have executed test profile 1 (n=21). Test profile 2 has been executed by 17,24% (n=10). 46,55% executed both test profile 1 and test profile 2 (n=27).



Test Profile 1

Figure 9 shows how many times the instructors have executed test profile 1 of the EFB. The most named category is less than five times, which is named by 54,16% (n=26). This is followed by five to ten times which is named by 22,92% (n=11). Eleven to 15 times is chosen by 8,33% (n=4). The categories 16-20, 21-30, 31-40, and 41-50 times are each chosen by 2,08% (n=1). Over 100 times is named by 6,25% (n=3).



The question “In which settings did you execute the test profile 1 of the EFB?” offered six answering options of which each one could be chosen. This is presented in Figure 10. “Sports club” is chosen by 56,25% and thus the most frequently named answer (n=27). 27,08% name event as a setting (n=13). 20,83% say that they have executed test profile 1 in the setting of a project (n=10). 6,25% ticked “working place” (n=3). The least named setting is “fitness centre” with 2,08% (n=1). In the additional offered text field, one person writes that he or she did not execute test profile 1 in a setting, but privately for him- or herself.

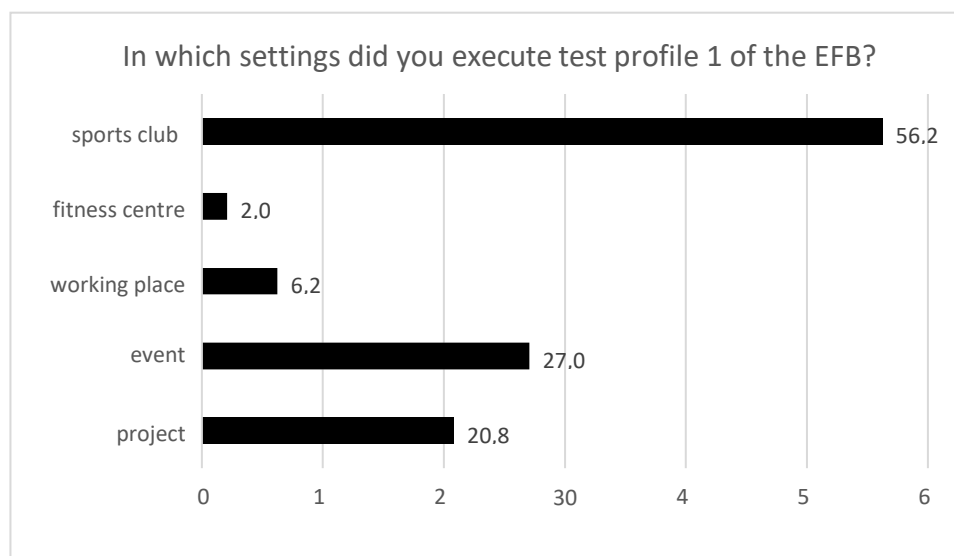
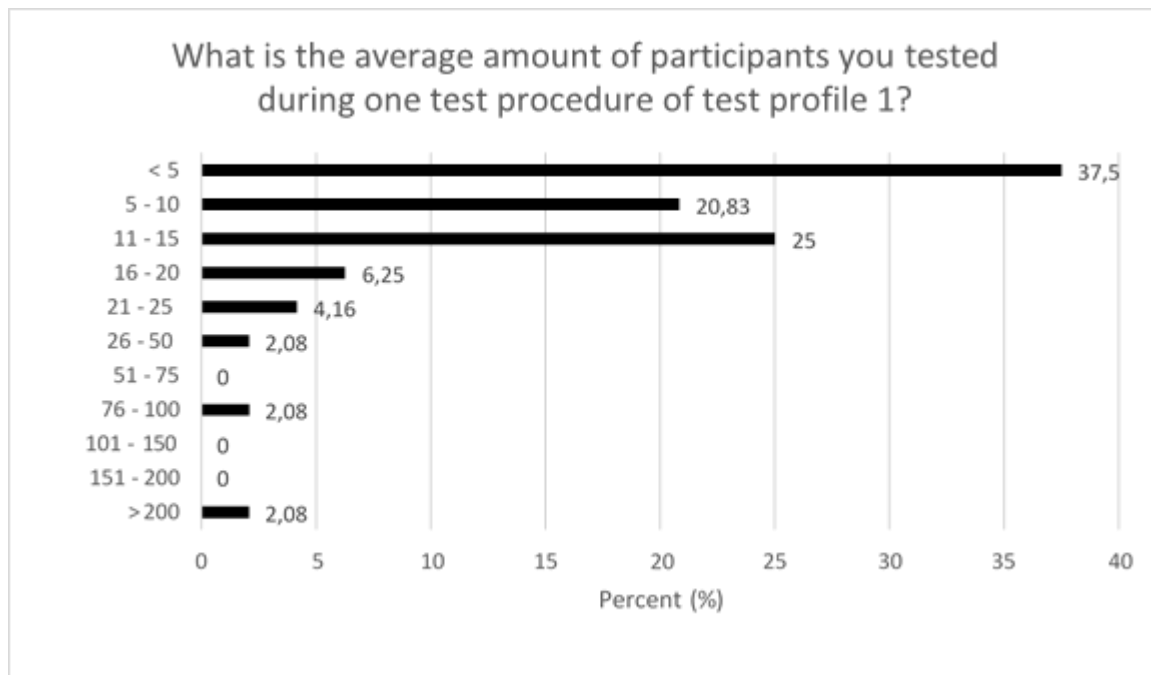
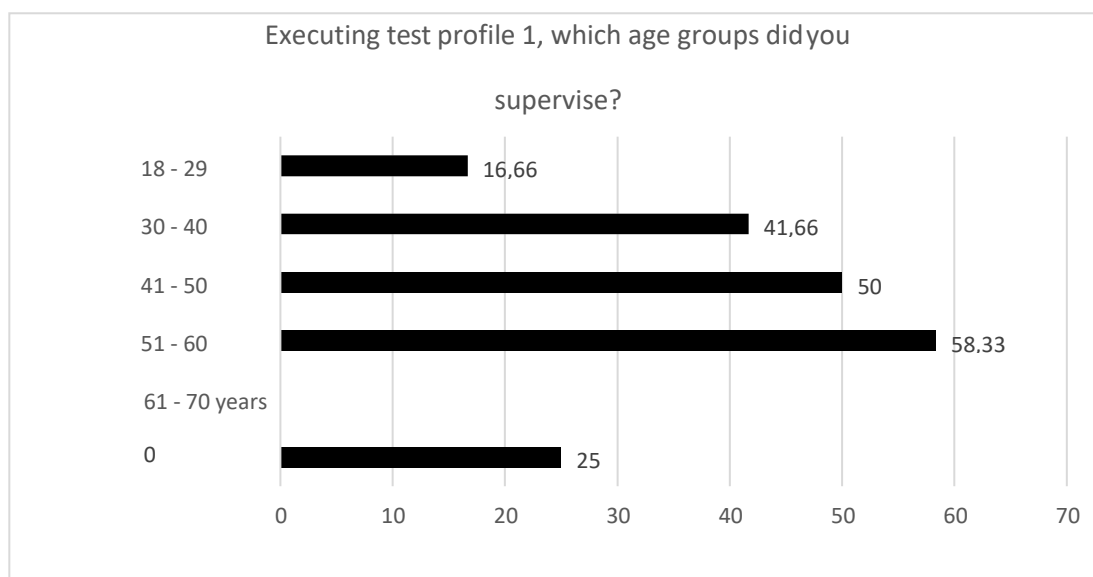


Figure 11 outlines the average amount of participants the instructors had during one test procedure of test profile 1. 37,5% of the instructors name less than five (n=18). “5– 10” is ticked by 20,83% (n=10). 25% of the instructors say that they had an average amount of eleven to 15 participant during one test procedure (n=12). “16 – 20” is cho-sen by 6,25% (n=3). 4,16% say that they had an average amount of 21 -25 participants (n=2). The categories “26 – 50”, “75 – 100”, and “> 200” are each chosen by 2,08% of the instructors (n=1).

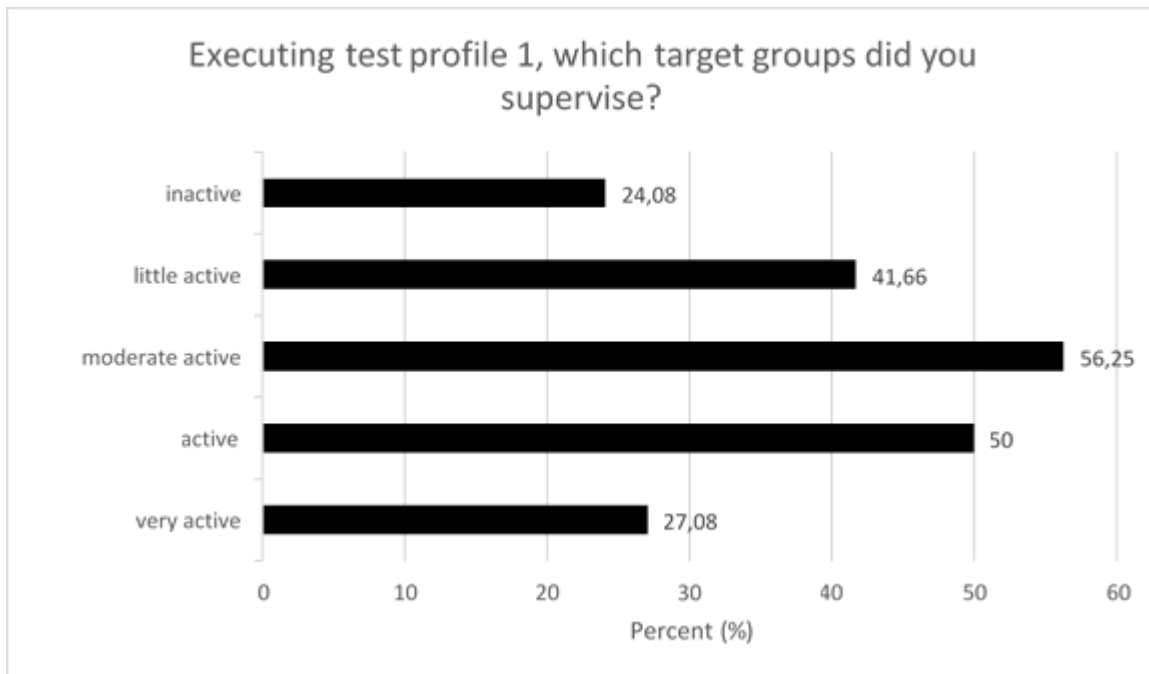


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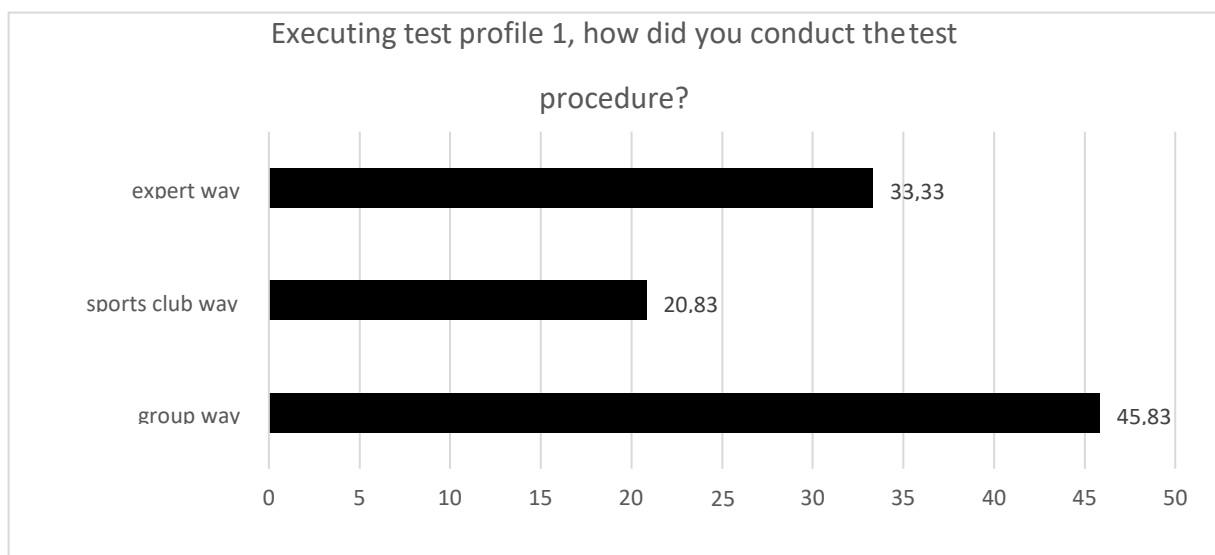
The answers to the question about which age groups the instructors supervised while executing test profile 1 are presented in Figure 12. This is a multiple naming question. That is why more than one answer could be chosen. 16,66% of the instructors choose answer “18 – 29 years” (n=8). The age group “30 – 40 years” is chosen by 41,66% of the instructors (n=20). 50% supervised the age group “41 – 50 years” (n=24). 58,33% choose the answer “51 – 60 years” (n=28). 0% supervised people of the age of 61 to 70 years (n=0). 25% say that they supervised people that were older than 70 years (n=12).



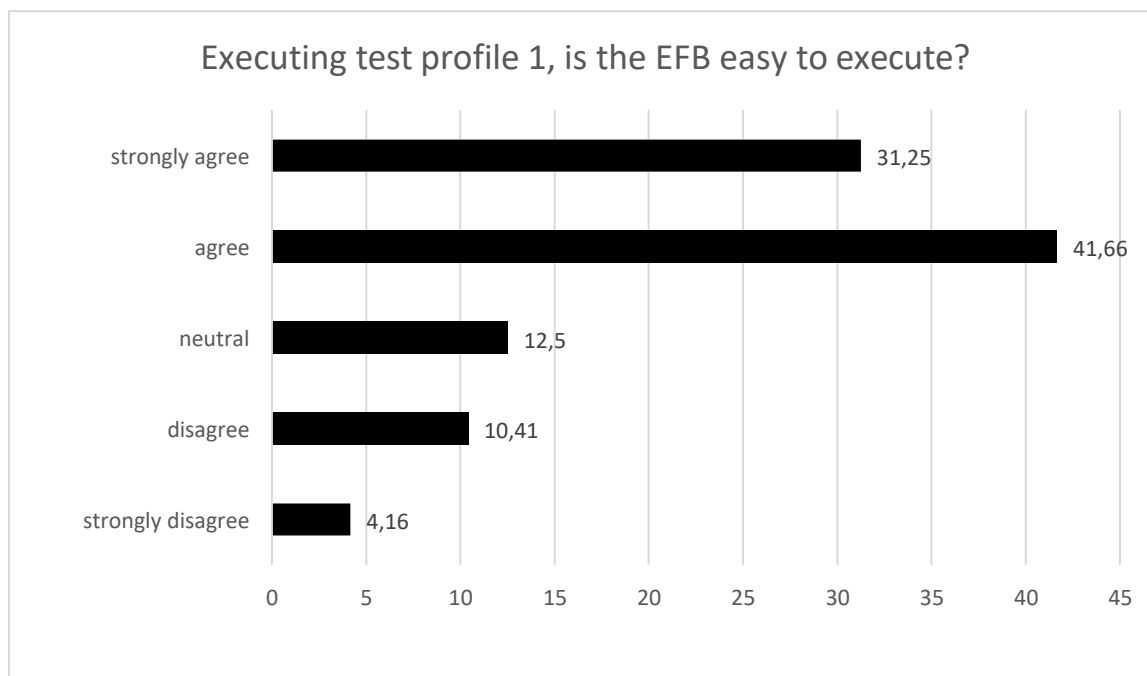
The target groups supervised during test profile 1 are presented in Figure 13. This is a multiple naming question. 24,08% of the instructors supervised the target group of in- active people (n=13). “Little active” is chosen by 41,66% of the instructors (n=20). 56,25% of the instructors use the test profile 1 for people which moderate active (n=27). 50% of instructors state that they supervised active people (n=24). “Very active” is chosen by 27,08% of the instructors (n=13).



There are different ways of conducting the EFB as a trainer, and three principal strategies are usually used. The three main options are presented as answers in Figure 14. The most frequently used way is the “group way” used by 45,83% (n=22). 33,33% used mostly the “expert way” (n=16). The “sports club way” is used mostly by 20,83% of the instructors (n=10).



The participants the survey were asked to rate how easy test profile 1 of the EFB is to execute. The range is between strongly agree and strongly disagree (figure 15). The agreement of the participants is presented in Figure 15. 31,25% strongly agree (n=15). 41,66% agree to the statement that test profile 1 is easy to execute (n=20). 12,5% choose neutral as answer (n=6). 10,41% disagree (n=5). 4,16% strongly disagree (n=2). In total, 72,92% agree (n=35) whereas 14,58% disagree (n=7).



The following table (table N° 1) shows the outcome of the rating of the test items of test profile 1. The cut- off value – which is important since it shows whether an item is significant or not – is set at 3,0. The reason for this is that “neutral” is marked as three and everything higher than this is important for the evaluation.

The item “step test” has a mean value of 3,35. This is higher than 3,0 and thus significant. The standard deviation (SD) is 1.25. 6,25% of the instructors found it very difficult to execute this test item (n=3). 22,91% rate this item as difficult (n=11). 22,91% choose a neutral opinion (n=11). 25% rate the step test as easy to execute (n=12). 22,91% say it is very easy (n=11).

“Plank” has a mean value of 3,77, which is significant. The standard deviation here has a value of 1,10. 2,08% say that this test item is very difficult to execute (n=1). 12,5% say that is difficult to execute this test item (n=6). 22,91% choose the neutral option (n=11). 31,25% rate this item as easy (n=15). Again, 32,25% rate it as very easy (n=15).

“Standing up with one leg” has a mean value of 3,60, which is significant. The standard deviation is 1,28. “Very difficult” is chosen by 6,25% (n=3). 18,75% choose “difficult” (n=9). 14,85% have a neutral opinion on this item (n=7). 29,16% say it is easy (n=14). 31,25% rate this item as very easy (n=15). This rating shows that 60,41% think it is easy or very easy (n=29) to execute compared to 21,1% who think it is difficult or very difficult (n=12).

The item “push-up” has a mean value of 3,42. This value is significant. The standard deviation has a value of 1,25. It is rated as very difficult by 6,25% (n=3). 22,91% say it is difficult to execute (n=11). “Neutral” is chosen by 16,66% (n=8). 31,25% rate this item as easy to execute (n=15). 22,91% say it is very easy to execute (n=11).

The test item “balancing on one leg” has a mean value of 4,06 which is significant. The standard deviation has a value of 0,95. 2,8% of the instructors rated this item as very difficult (n=1). “Difficult” is chosen by 4,16% (n=2). A neutral opinion was stated by 16,66% (n=8). 39,58% say that this item is easy for instructors to execute (n=19). 37,5% rate this item as very easy (n=18).

“Jumping jacks” has a mean value of 4,06. This is significant. The standard deviation is 0,95. This item is rated as very difficult by 2,08% (n=1). Again, 2,08% rate it as difficult to execute (n=1). 22,91% have a neutral opinion on this item (n=11). 33,33%, rate it as very easy (n=16). 39,58% even say it is very easy to execute (n=19).

The test item “sit and reach” has a mean value of 3,98. This is significant. The standard deviation has a value of 1,08. 4,16% rate this item as very difficult (n=2). 4,16% say that this item is difficult to execute as instructor (n=2). 20,83% have a neutral opinion (n=10). 31,25% rate this item as easy to execute (n=15). 39,58% think it is very easy (n=19).

“ABSI” has a mean value of 3,94, which is significant. The standard deviation is 1. 2,08% rate this test item as very difficult (n=1). Again 2,08% rate this item as difficult to execute (n=1). 29,16% choose “neutral” as answer (n=14). 33,33% say that this item is easy to execute (n=16). Also, 33,33% think it is very easy to execute (n=16).

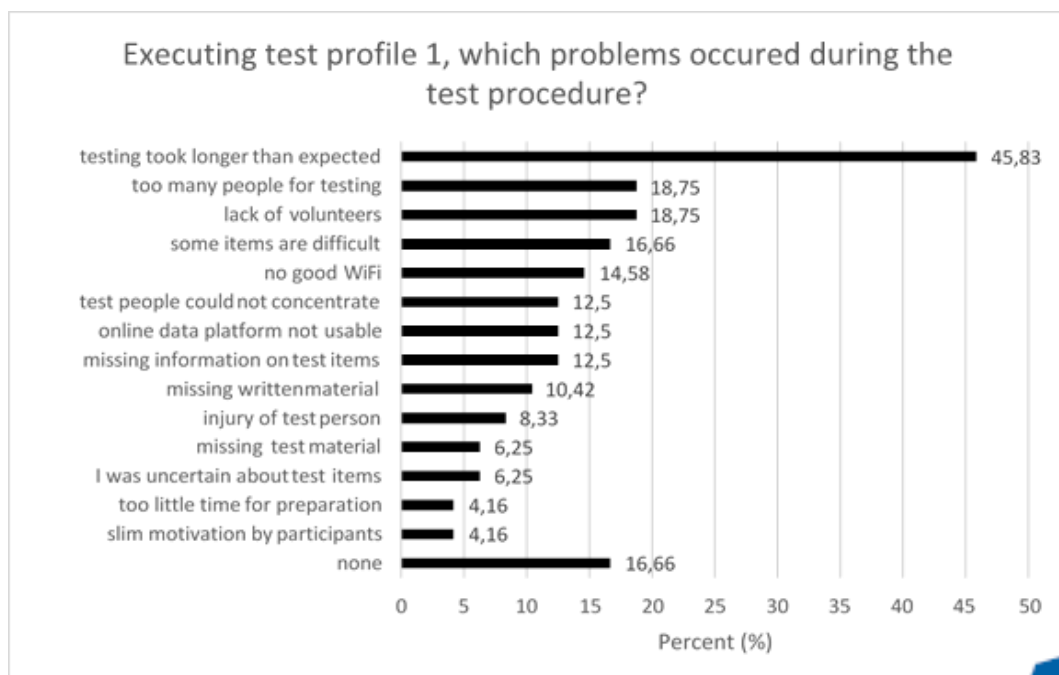
“BMI” has a mean value of 4,06. This is significant. The standard deviation has a value of 1. As the item before, 2,08% rate this item as very difficult (n=1) and 2,08% rate it as difficult (n=1). 22,91% of the instructors have a neutral opinion (n=11). 33,33% state that this item is easy to execute (n=16). 39,58% think this item is very easy to execute (n=19).

“Posture” has a mean value of 3,54. This is significant. The standard deviation is 1,18. 4,16% rate this item as very difficult (n=2). 18,75% say that it is difficult to execute (n=9). 20,83% choose “neutral” (n=10). 31,25% say that it is easy to execute (n=15). 25% think that this item is very easy to execute (n=12).

test item	very difficult (1)		difficult (2)		neutral (3)		easy (4)		very easy (5)			
	Σ	%	Σ	%	Σ	%	Σ	%	Σ	%	ø	±
step test	3	6,25	11	22,91	11	22,91	12	25	11	22,91	3,35	1,25
planking	1	2,08	6	12,5	11	22,91	15	31,25	15	31,25	3,77	1,10
standing up with one leg	3	6,25	9	18,75	7	14,85	14	29,16	15	31,25	3,60	1,28
push- up	3	6,25	11	22,91	8	16,66	15	31,25	11	22,91	3,42	1,25

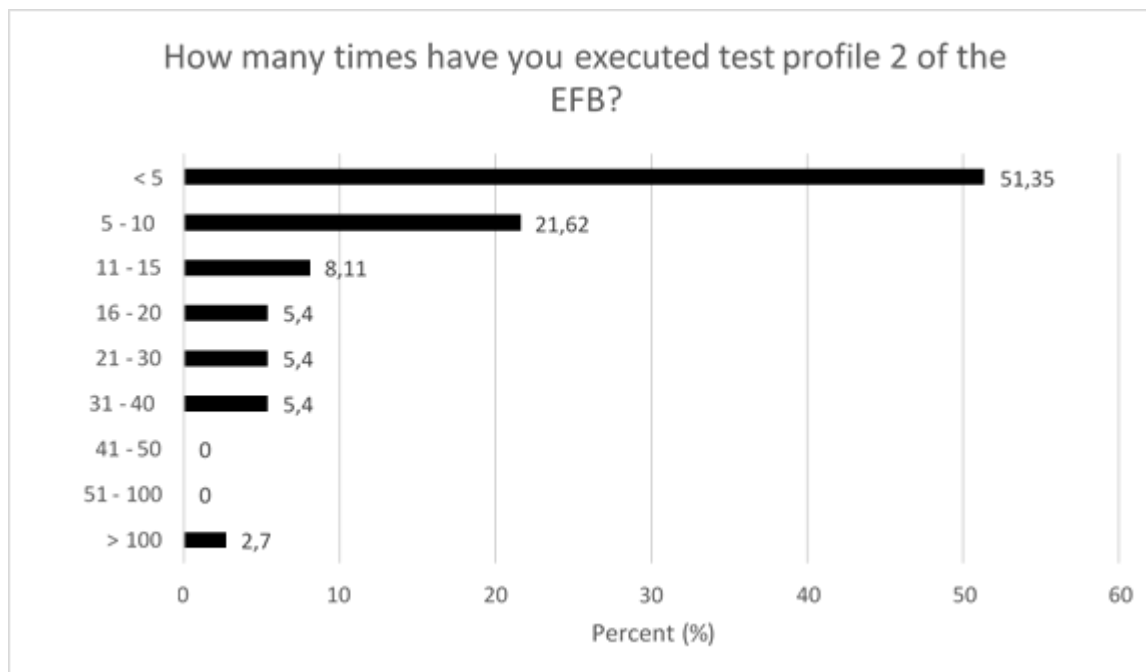
balancing on one leg	1	2,08	2	4,16	8	16,66	19	39,58	18	37,5	4,06	0,95
jumping jacks	1	2,08	1	2,08	11	22,91	16	33,33	19	39,58	4,06	0,95
sit and reach	2	4,16	2	4,16	10	20,83	15	31,25	19	39,58	3,98	1,08
ABSI	1	2,08	1	2,08	14	29,16	16	33,33	16	33,33	3,94	1
BMI	1	2,08	1	2,08	11	22,91	16	33,33	19	39,58	4,06	1
posture	2	4,16	9	18,75	10	20,83	15	31,25	12	25	3,54	1,18

When executing test profile 1, there are aspects that might arise and generate problems for the trainers. This is why the instructors were asked which problems occurred during the execution of test profile 1. Subsequently, the variety of answers is presented in Figure 16. This is a multiple naming question, so more than one answer could be chosen. 45,83% say that the testing took longer than expected (n=22). 18,75% of the instructors had too many people for the testing (n=9). Again, 18,75% claim a lack of volunteers to assist during the testing (n=9). 16,66% think that some test items are difficult (n=8). 14,58% had a bad WiFi connection (n=7). The categories “test people could not concentrate”, “online data platform not usable”, and “missing information on test items” are each chosen by 12,5% of the instructors of test profile 1 (n=6). 10,42% say that they did not have access to every written material (n=5). 8,33% claim that a test person got injured during the test procedure (n=4). “Missing test material” as well as “I was uncertain about test items” are each named by 6,25% of the instructors which conducted test profile 1 (n=3). The least named categories are “too little time for preparation” and “slim motivation of the test participants” with each 4,16% (n=2). 16,66% did not have any problems during the test procedure (n=8). Additionally, one instructor states that performers would be very generous and benevolent if there is no neutral supervisor for controlling the test procedure. Another problem was that not every test item could be executed outdoors. Another instructor complains about the additional costs for the test materials. Also, one instructor says that the test item “sit and reach” was not always possible, because of a missing chair that could be adjusted for height. Another comment is that there was little time for the feedback. A further comment related to an explanation in German: “ausreichend”, which describes the grade four which is not a good grade and therefore does not motivate the test participants.



Test Profile 2

Figure 17 presents how often the instructors have executed test profile 2. 51,35% have executed it less than 5 times (n=19). 21,62% executed it five to ten times (n=8). 8,11% say that they have executed the test profile 2 eleven to 15 times (n=8). The answers “16 – 20”, “21 – 30”, and “31 – 40” are each chosen by 5,4% (n=2). The test profile 2 was executed over 100 times by 2,7% (n=1).



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The instructors were asked about the settings in which they executed test profile 2. This is why multiple answers were possible. The answers given are presented in Figure 18. 72,97% executed the test profile 2 in a sports club (n=27). Only 2,7% executed test profile 2 in a fitness centre (n=1). 8,11% executed test profile 1 at the working place (n=3). 35,14% executed test profile 1 during an event (n=13). 27,03% executed test profile 2 in the setting of a project (n=10).

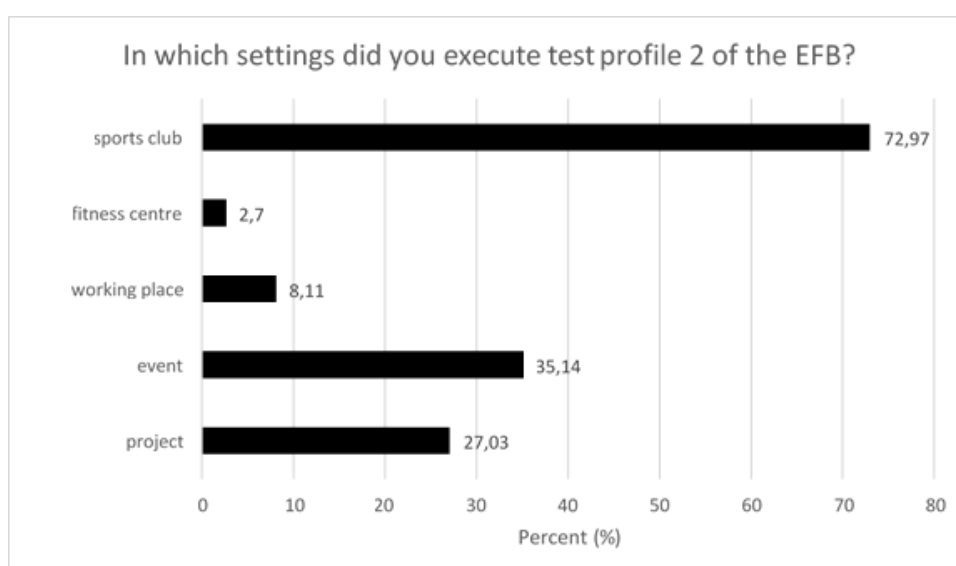


Figure 19 displays the average number of participants during one test procedure of test profile 2. The most named answer “less than five” participants is named by 56,76% (n=21). 13,51% state that they have five to ten participants per testing (n=5). “11 – 15” participants is named by 10,81% (n=4). Another 13,51% have 16 to 20 participants per test procedure (n=5). 2,7% choose answer “26 – 50” (n=1). Another 2,7% choose between 101 and 150 participants (n=1)

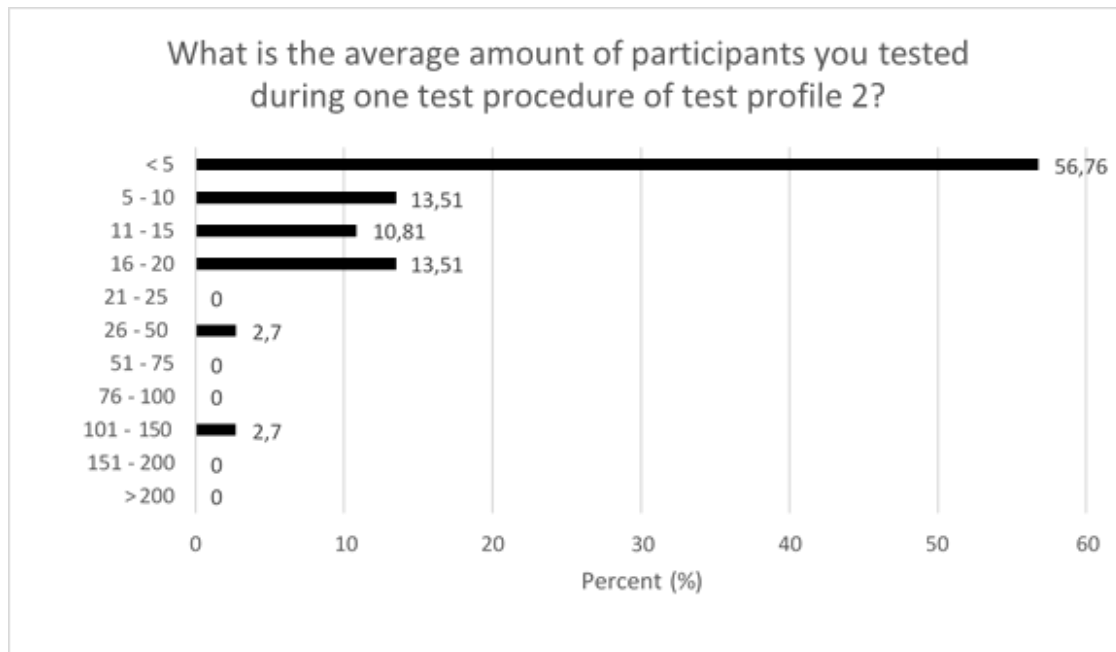
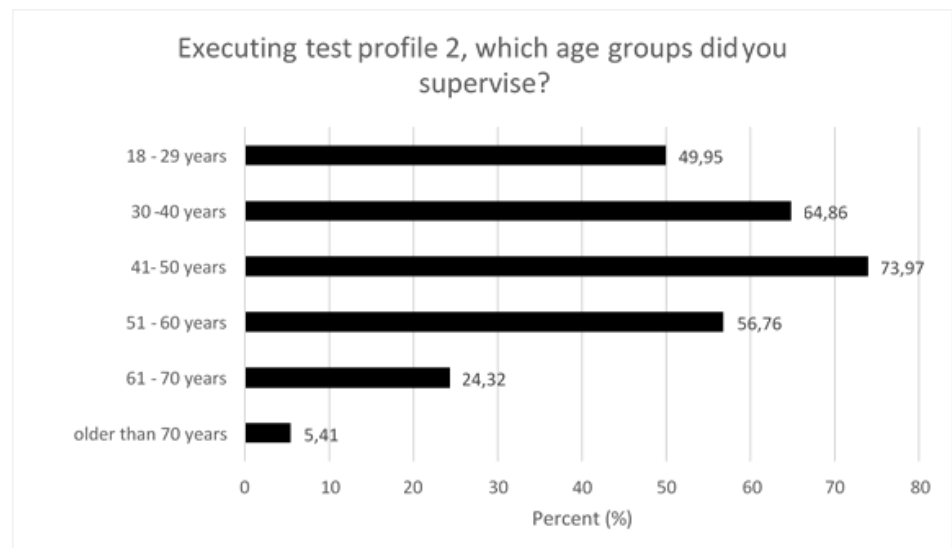


Figure 20 displays the age groups that were supervised during the execution of test profile 2. Since different age groups can be tested at the same time, this question has been designed as a multiple answer question. The youngest group (18 – 29 years) are supervised by 49,95% (n=17). The following age group (30 – 40 years) are supervised by 64,86% (n=24). The age group of 41 to 50 years is tested most frequently by 73,97% (n=27). 51 – 60 years old people are supervised by 56,76% (n=21). The age group of 61 to 70 years is supervised by 24,32% (n=9). The oldest which are older than 70 years are supervised by 5,41% (n=2).



Since different target groups can be tested during the same test day, the question “Which target groups did you supervise?” has been designed as a multiple answer question. The given answers are presented in Figure 21. This test profile is designed for active people rather than for inactive people. This is also represented in this data. Only 8,11% of the instructors say that they have tested inactive people (n=3) and 14,7% claim they tested little active people (n=5). 35,14% supervised moderate active people (n=13). The target group of active people was supervised by 81,08% of the instructors (n=30). The target group with the highest activity level, very active, was supervised by 54,05% (n=20).

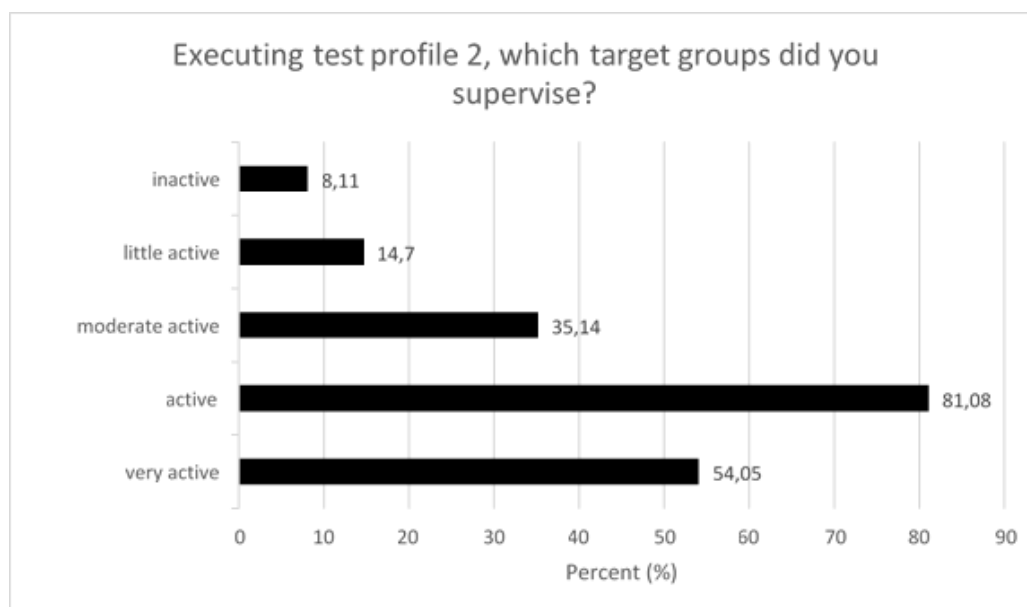
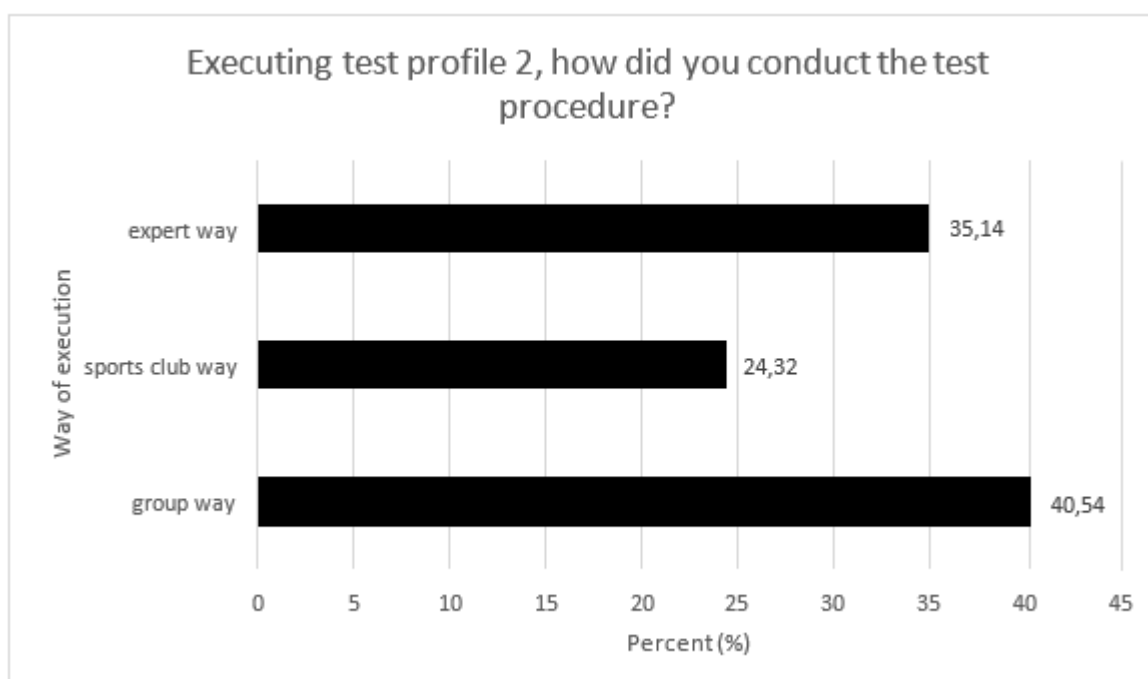


Figure 22 describes how the instructors conducted the test procedure. The “expert way” is chosen by 35,14% (n=13). The “sports club way” is the least named way by 24,32% (n=9). The most frequently named way of conduction is the “group way” which is chosen by 40,54% (n=15).



The opinion of the instructors on whether the EFB is easy to execute is shown in Figure 23. 31,25% strongly agree to this statement (n=10). 41,66% agree (n=14). 12,5% have a neutral opinion (n=6). Only 10,41% disagree (n=7). No instructor strongly disagrees (n=0).

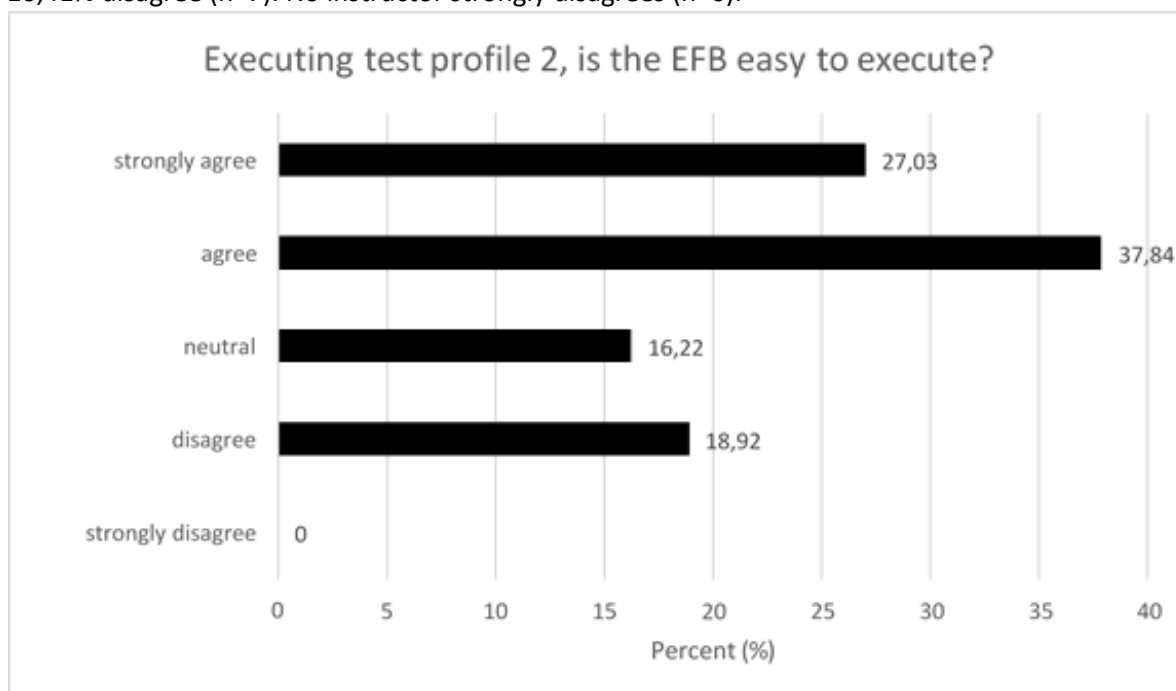


Table 2 shows the outcome of the rating of the test items of test profile 2. The cut-off value – which is important since it shows whether an item is significant or not – is set at 3,0. The reason for this is that “neutral” is marked as three and thus everything higher than this is important for the evaluation.

The item “step test” has a mean value of 3,11. This is significant. The standard deviation has a value of 1,31. 10,81% of the instructors think that it is very difficult to execute (n=4). 27,03% rate this item as difficult (n=10). 21,62% choose a neutral opinion (n=8). 21,62% rate the step test as easy to execute (n=8). 18,92 say it is very easy (n=7).

The walking test has a mean value of 3,11, which is significant. The standard deviation is 1,17. 10,81% rate this item as very difficult (n=4). 16,21% think it is difficult to execute (n=6). 37,84% have a neutral opinion (n=14). 21,62% think it is easy to execute (n=8). 13,51% of the instructors rate this item as very easy to execute (n=5).

“Plank” has a mean value of 3,92, which is significant. The standard deviation is 1,13. 5,4% say that this test item is very difficult to execute (n=2). Again 5,4% say that is difficult to execute (n=2). 18,92% choose the neutral option (n=7). 32,43% rate this item as easy (n=12). 37,84% rate it as very easy (n=14).

“Jump and reach” has a mean value of 3,68. This is significant. The standard deviation is 1,08. “Very difficult” is chosen by 2,7% (n=1). 10,81% choose “difficult” (n=4). 29,73% have a neutral opinion on this item (n=11). Another 29,73% say it is easy (n=11). 27,03% rate this item as very easy (n=10).

The item “push-up” has a mean value of 3,76. This is significant. The standard deviation has a value of 1,2. It is rated as very difficult by 2,7% (n=1). 18,92% say it is difficult to execute (n=7). “Neutral” is

chosen by 13,51% (n=5). 29,73% rate this item as easy to execute (n=11). 35,14% say it is very easy to execute (n=13).

The test item “flamingo” has a mean value of 3,95, which is significant. The standard deviation for this item is 1,15. 5,4% of the instructors rated this item as very difficult (n=2). “Difficult” is chosen by 8,11% (n=3). A neutral opinion was stated by 10,81% (n=4). The categories “easy” and “very easy” are each chosen by 37,84% (n=14). This adds up to 13,51% who rate this item as difficult or very difficult (n=5).

“Walking backwards” has a mean value of 4,03 which is significant. The standard deviation is 1,04. This item was rated as very difficult by 5,4% (n=2). 2,7% rate it as difficult to execute (n=1). 10,81% have a neutral opinion on this item (n=4). Most of the instructors, 45,95%, rate it as very easy (n=17). 35,14% even say it is very easy to execute (n=13).

The test item “sit and reach” has a mean value of 4,22. This is significant. The standard deviation has a value of 0,89. 2,7% rate this item as very difficult (n=1). No instructors, 0%, state that this item is difficult to execute (n=0). 13,51% have a neutral opinion (n=5). 40,54% rate this item as easy to execute (n=15). 43,24% think it is very easy (n=16).

“ABSI” has a mean value of 4,2. This is significant. The standard deviation is 0,9. As the item before, 2,7% rate this item as very difficult (n=1) and no instructor, 0%, says that this item is difficult to execute (n=0). 18,92% choose “neutral” (n=7). 29,73% say that this item is easy to execute (n=11). 48,65% think it is very easy to execute (n=18). “BMI” has a mean of 4, which is significant. The standard deviation has a value of 1. As the two test items before, 2,7% rate this item as very difficult (n=1) and no instructors says that this item is difficult to execute. 16,21% of the instructors have a neutral opinion (n=6). 32,43% state that this item is easy to execute (n=12). 48,65% think this item is very easy to execute (n=18).

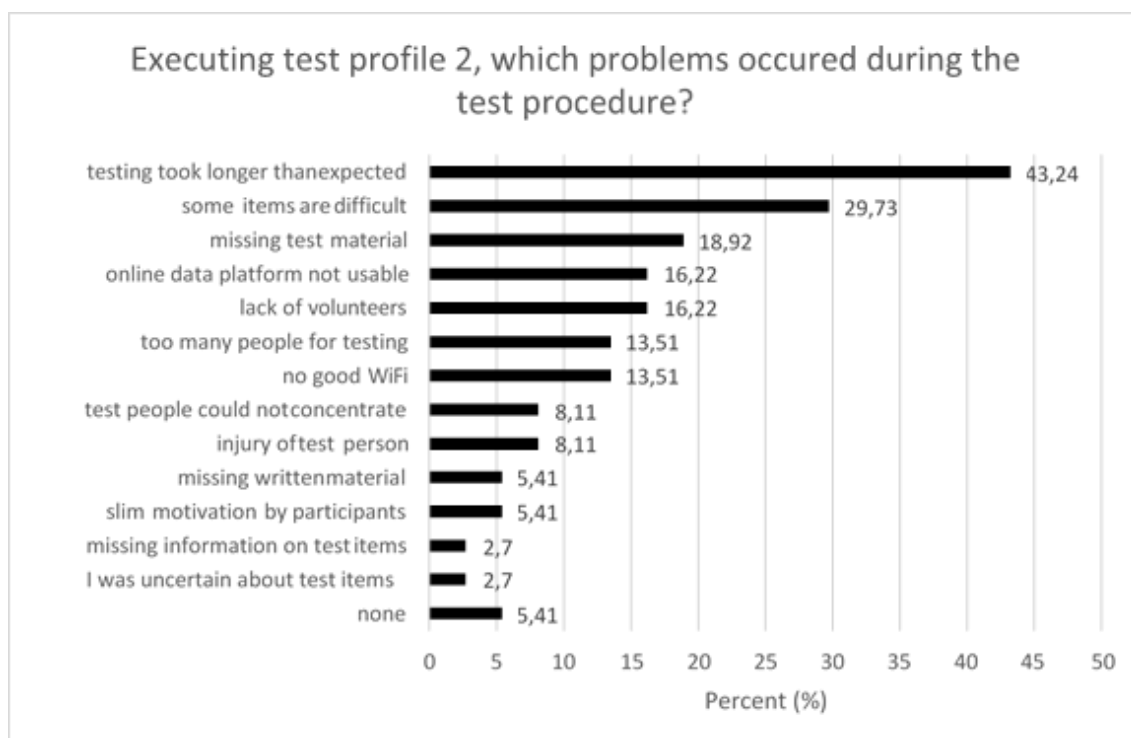
“Posture” has a mean value of 3,68. This is significant. The standard deviation for this item is 1,11. 2,7% rate this item as very difficult (n=1). 13,51% say that it is difficult to execute (n=5). 24,32% choose “neutral” (n=9). 32,43% say that it is easy to execute (n=12). 27,03% think that this item is very easy to execute (n=10).

test item	very difficult (1)		difficult (2)		neutral (3)		easy (4)		very easy (5)			
	Σ	%	Σ	%	Σ	%	Σ	%	Σ	%	\bar{x}	s
step test	4	10,81	10	27,03	8	21,62	8	21,62	7	18,92	3,11	1,31
walking test	4	10,81	6	16,21	14	37,84	8	21,62	5	13,51	3,11	1,17
plank	2	5,4	2	5,4	7	18,92	12	32,43	14	37,84	3,92	1,13
Jump and reach	1	2,7	4	10,81	11	29,73	11	29,73	10	27,03	3,68	1,08
push- up	1	2,7	7	18,92	5	13,51	11	29,73	13	35,14	3,76	1,21
flamingo	2	5,4	3	8,11	4	10,81	14	37,84	14	37,84	3,95	1,15

walking back-wards	2	5,4	1	2,7	4	10,81	17	45,95	13	35,14	4,03	1,04
sit and reach	1	2,7	0	0	5	13,51	15	40,54	16	43,24	4,22	0,89
ABSI	1	2,7	0	0	7	18,92	11	29,73	18	48,65	4,2	0,9
BMI	1	2,7	0	0	6	16,21	12	32,43	18	48,65	4	1
posture	1	2,7	5	13,51	9	24,32	12	32,43	10	27,03	3,68	1,11

Figure 24 shows problems that occurred during the test procedure of test profile 2. Because more than one problem could occur, multiple answers were possible. The most frequently mentioned problem is “testing took longer than expected”. 43,24% of the instructors ticked this answer (n=16). This is followed by “some items are difficult”, which was named by 29,73% (n=11). 18,92% complain about missing test materials (n=7). 16,22% of the instructors say that the online data platform was not usable (n=6). Another 16,22% did not have enough volunteers to assist during the test procedure (n=6). Another technical issue was that 13,51% did not have a good WiFi connection (n=5). Regarding the testing itself, 13,51% of the instructors say that they had too many people for testing (n=5). 8,11% say that the test participants were not able to concentrate (n=3). Another 8,11% say that a test person got injured during the testing (n=3). 5,41% mentioned missing written material as problem (n=2). Also, 5,41% complain about the slim motivation of test participants (n=2). “Missing information on test items” as well as “I was uncertain about test items” are each named by 2,7% (n=1). 5,41% say that they did not have any problems during the test procedure (n=2).

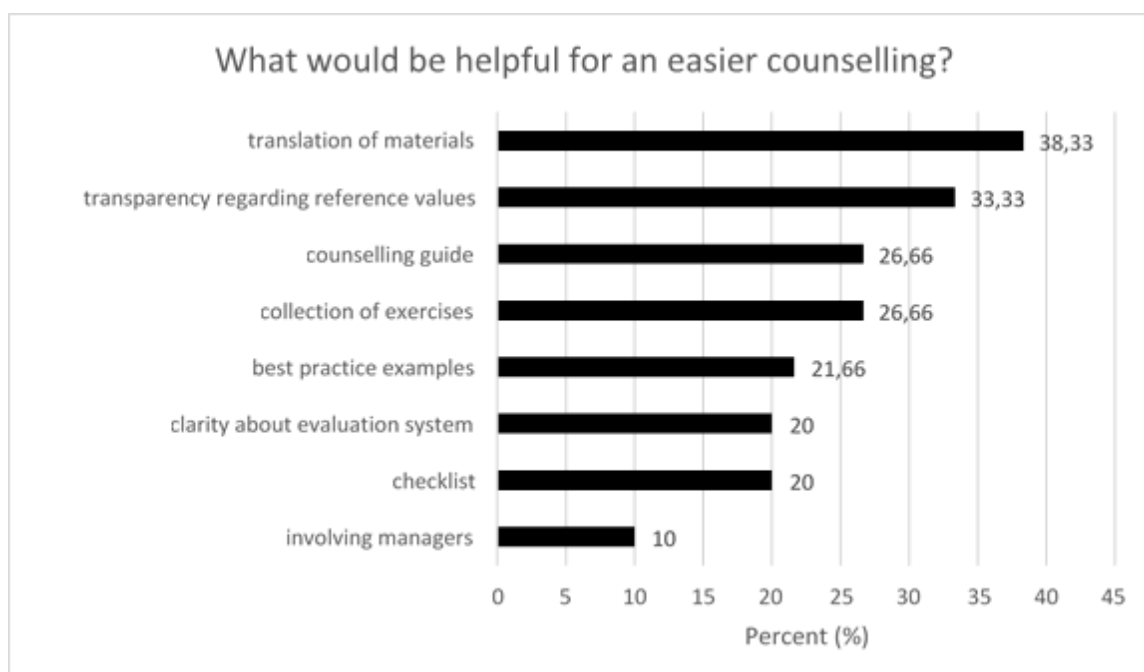
Additional comments are the following: “Step are too low for step test”, “lack of individuality due to too few exercises”, “jump and reach is difficult to perform outdoors”, “costs for additional materials”, and “time for feedback in personal conversation”.



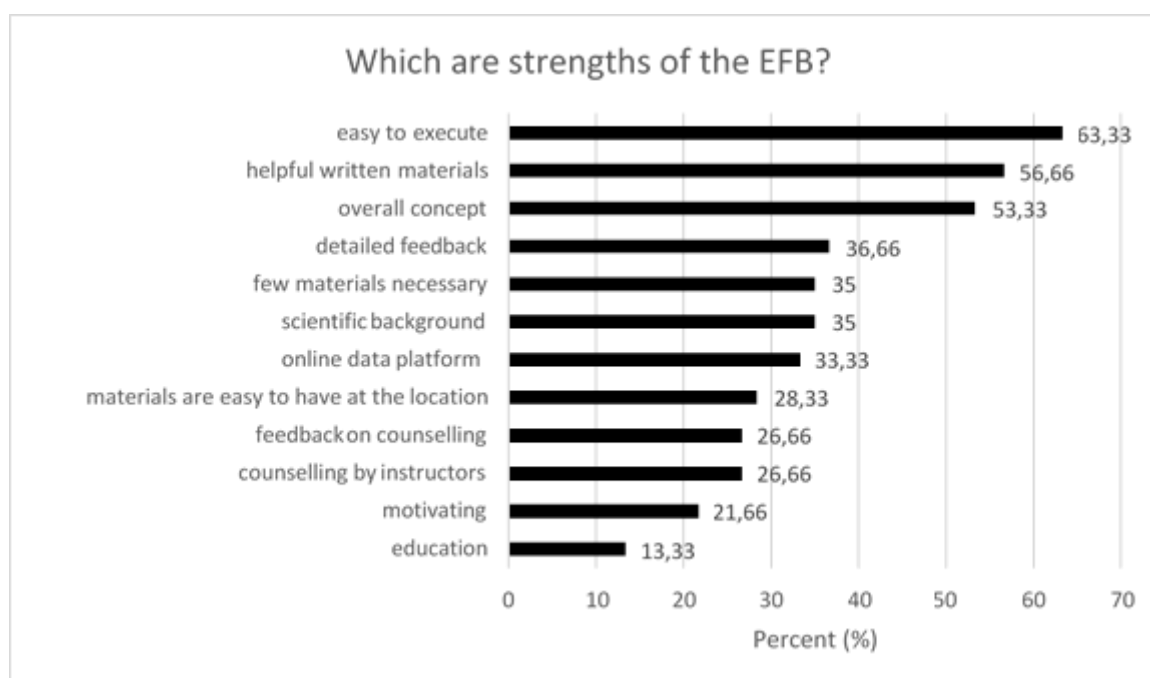
Additional information

Additional to each test profile, the instructors who participated in the survey were asked about general aspects of the EFB. These are presented in the following figures.

One of the questions enquired about what would be helpful for easier counselling. Multiple answers are possible. The given answers are displayed in Figure 25. 38,33% would appreciate a translation of the materials in each language (n=23). 33,33% think that it would help to have more transparency regarding the reference values (n=20). “Counselling guide” and “collection of exercises” are each named by 26,66% (n=16). 21,66% say that best practice examples would help (n=13). 20% would need more clarity about the evaluation system and how it works (n=12). Another 20% would appreciate a checklist (n=12). 10% think that involving managers of sports clubs, fitness centres, etc. would be helpful for an easier counselling (n=6). Additional remarks given are “document the exact numbers, not grouping results”, “more exercises to evaluate precisely the individual performance level”, “further support” and “revision of the elements” by each one instructor. Two instructors state that everything is going well and that they do not need more help.



All the instructors which have executed the EFB so far were asked about the strengths of the EFB. Multiple answers are possible. The answers are shown in Figure 26. 63,33% of the instructors say that it is easy to execute (n=38). 56,66% think that the written materials are helpful (n=34). 53,33% say that the overall concept is a strength of the badge (n=32). 36,66% name the detailed feedback (n=22). The answers “few materials necessary” and “scientific background” are named by 35% (n=21). 33,33% name the online data platform (n=20). 28,33% think that the materials are easy to have at the location (sports club, fitness centre, working place or event) (n=17). 16,66% approve the feedback on counselling (n=16). 26,66% think the counselling by the instructors is a strength of the EFB (n=16). 21,66% think that it is motivating (n=13). 13,33% see the education of the EFB as strength (n=8).



The instructors were asked to rate five questions about “Is the badge helpful...”. The results are displayed in Table 3. The cut-off value for this rating is 3,0. This is set because of the answer “neutral” which is a three and the basis for positive answers.

The first question is about the helpfulness of the badge for test people to increase the awareness of the importance of fitness. The mean value is 3,84. This is significant. The standard deviation is 0,84. 18,97% state that they agree to this (n=11). 53,44% agree (n=31). 17,24% choose “neutral” as answer (n=10). 8,62% disagree (n=5). 0% strongly disagree (n=0). 1,72% rated it as not relevant (n=1).

The question “Is the badge helpful to encourage people to do more for their fitness?” has a mean value of 3,96 which is significant. The standard deviation is 0,73. 20,67% strongly agree (n=12). Most of the instructors, 58,62%, agree to this question (n=34). 17,24% have a neutral opinion (n=10). 3,44% disagree (n=2). 0% strongly disagree (n=0) as well as 0% ticked not relevant (n=0).

The question about bringing new members in the sports club or fitness centre has a mean value of 3,06. This is significant. The standard deviation is 1,04. 5,17% strongly agree (n=3). 27,59% agree to this (n=16). 36,21% have a neutral opinion (n=21). 15,52% disagree (n=9). 8,62% strongly disagree (n=5). 6,89% say that it is not relevant (n=4). “Is the badge helpful in the process of building up fitness in training groups?” has a mean 3,63. This is significant. The standard deviation is 0,96. 17,24% strongly agree to this question (n=10). 36,21% agree (n=21). 29,31% have a neutral opinion (n=17). 8,62% disagree (n=5). 1,72% strongly disagree (n=1). 6,89% say that it is not relevant (n=4).

The last question asked is about motivating people to doing more for their fitness. This question has a mean value of 3,91 which is significant. The standard deviation has a value of 0,84. 18,97% strongly agree to this aspect (n=11). 62,07% agree (n=36). 13,79% ticked “neutral” (n=8). 1,72% disagree (n=1). 3,45% strongly disagree (n=2). 0% ticked “not relevant” (n=0).

question	strongly disagree (1)		disagree (2)		neutral (3)		agree (4)		strongly agree (5)		not relevant (6)			
	Σ	%	Σ	%	Σ	%	Σ	%	Σ	%	Σ	%	\emptyset	\pm
Q1	0	0	5	8,62	10	17,24	31	53,44	11	18,97	1	1,72	3,84	0,84
Q2	0	0	2	3,44	10	17,24	34	58,62	12	20,67	0	0	3,96	0,73
Q3	5	8,62	9	15,52	21	36,21	16	27,59	3	5,17	4	6,89	3,06	1,04
Q4	1	1,72	5	8,62	17	29,31	21	36,21	10	17,24	4	6,89	3,63	0,96
Q5	2	3,45	1	1,72	8	13,79	36	62,07	11	18,97	0	0	3,91	0,84

Q1: for test people to increase the awareness of the importance of fitness?

Q2: to encourage people to do more for their fitness?

Q3: for bringing new members in the sport club or fitness centre?

Q4: in the process of building up fitness in training groups?

Q5: to motivate people to doing more for their fitness?

The instructors were asked to rate seven statements. The results are displayed in Table 4. The cut-off value for this rating is 3,0. This is because “neutral” is the lowest of the positive categories with a three.

The statement “Test people could follow my instructions easily” has a mean value of 4,48, which is significant. The standard deviation is 0,66. 55,17% strongly agree to this statement (n=32). 39,66% agree (n=23). 3,44% have a neutral opinion (n=2). 1,72% disagree (n=1). 0% strongly disagree (n=0).

“The test items are accepted by test people” has a mean value of 4,19. This is significant. The standard deviation for this statement is 0,76. 34,48% strongly agree to this statement (n=20). 51,72% agree to this statement (n=30). 12,07% ticked “neutral” as an answer (n=7). 1,72% disagree (n=1). 0% strongly disagree (n=0).

The statement that test people are motivated throughout the test procedure has a mean value of 4,09, which is significant. The standard deviation is 0,81. 31,03% strongly agree to this (n=18). 50% agree to this statement (n=29). 13,79% have a neutral opinion regarding this statement (n=8). 5,17% disagree (n=3). 0% strongly disagree (n=0).

“The suggestions for counselling are helpful” has a mean of 3,79. This is significant. The standard deviation is 0,91. 24,14% strongly agree to this (n=14). 39,66% agree (n=23). 27,59% choose the answer “neutral” (n=16). 8,62% disagree (n=5). 0% strongly disagree (n=0).

The statement that the handbook is helpful has a mean value of 3,91. This is significant. The standard deviation is 0,84. 25,86% strongly agree to this statement (n=15). 43,1% agree to this (n=25). 29,31% ticked “neutral” (n=17). 0% disagree (n=0). 1,72% strongly disagree (n=1).

“The picture cards are helpful” has a mean value of 4,24. This is significant. The standard deviation is 0,68. 36,21% strongly agree (n=21). 53,44% agree to this statement (n=31). 8,62% ticked “neutral” (n=5). 1,72% choose disagree (n=1). 0% choose strongly disagree (n=0).

The statement “the videos are helpful” has a mean of 3,67. The standard deviation for this statement is 0,83. 17,24% strongly agree (n=10). 37,93% agree to this statement (n=22). 39,66% choose “neutral” (n=23). 5,17% disagree (n=3). 0% strongly disagree (n=0).

statements	strongly dis- agree (1)		disagree (2)		neutral (3)		agree (4)		strongly agree (5)			
	Σ	%	Σ	%	Σ	%	Σ	%	Σ	%	Ø	±
S1	0	0	1	1,72	2	3,44	23	39,66	32	55,17	4,48	0,66
S2	0	0	1	1,72	7	12,07	30	51,72	20	34,48	4,19	0,76
S3	0	0	3	3,44	8	13,79	29	50	18	31,03	4,09	0,81
S4	0	0	5	8,62	16	27,59	23	39,66	14	24,14	3,79	0,91
S5	1	1,72	0	0	17	29,31	25	43,1	15	25,86	3,91	0,84
S6	0	0	1	1,72	5	8,62	31	53,44	21	36,21	4,24	0,68
S7	0	0	3	5,17	23	39,66	22	37,93	10	17,24	3,67	0,83

S1: Test people could follow my instructions easily.

S2: The test items are accepted by test people.

S3: Test people are motivated throughout the test procedure.

S4: The suggestions for counselling are helpful.

S5: The suggestions for counselling are helpful.

S6: The picture cards are helpful.

S7: The videos are helpful.

The question “Do you have ideas for improvements?” is an open designed question. 17,71% wrote a comment (n=17) and different aspects are named. One important aspect is the analysis and evaluation. More transparency is required on how the reference values as well as the age and sex are considered. Also, more information on how each value of the test components is calculated if more than one test item is available is asked for. Two instructors would wish for planking to be included in the calculation of test profile 2. Additionally, one instructor asks for “more clear/visual test parameters (what the requirements are to get 1,2 or 3) on the cue cards”.

Another instructor states that both test profiles are not meaningful enough, because they do not test enough to get a comprehensive picture of the fitness level in each individual category. Another comment regarding the testing itself is that the requirements for profiles 1 and 2 are too far apart. Test people with a sporty background are rather underchallenged by profile 1, but partly overstrained by profile 2. In addition, a tripping hazard is named. The step test is difficult for older participants to

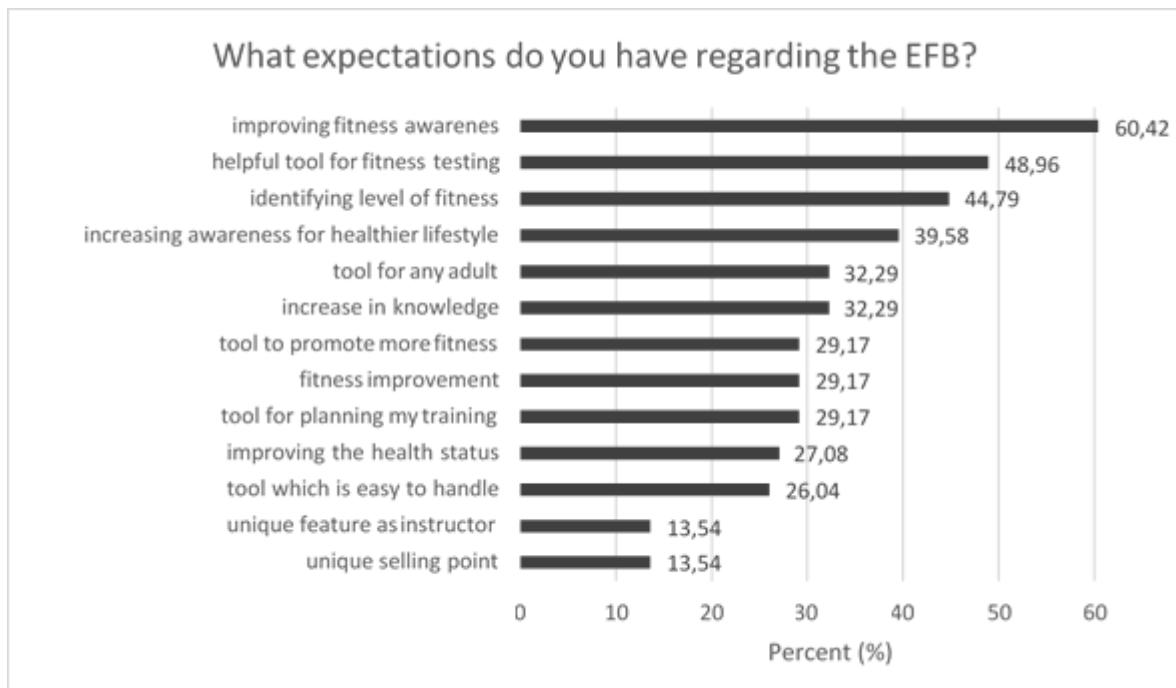
conduct because of the bench so that they stumbled. This instructor used a stepper instead, but they are lower than the required height of the test item.

Regarding the usage of the online data platform, one comment says that it is stressful at the beginning to understand the online analysis when conducting test profile 2. Another concern is about the data privacy protection if entering the personal data online. Questions such as "Will I then receive advertising?" or "Will my data be forwarded to other institutions?" are asked by the participants. Some instructors ask for more advertisements. For one, the EFB is not very known. For another, there are already many fitness tests around, so more promotion is necessary.

Another comment focused on the cost efficiency. The organization offering the EFB has to provide the test materials as well as materials for documentation and for the person conducting the test. This relates to additional costs. For small sports club this is difficult. This is why the instructor asks if it is possible to receive financial support by sports associations.

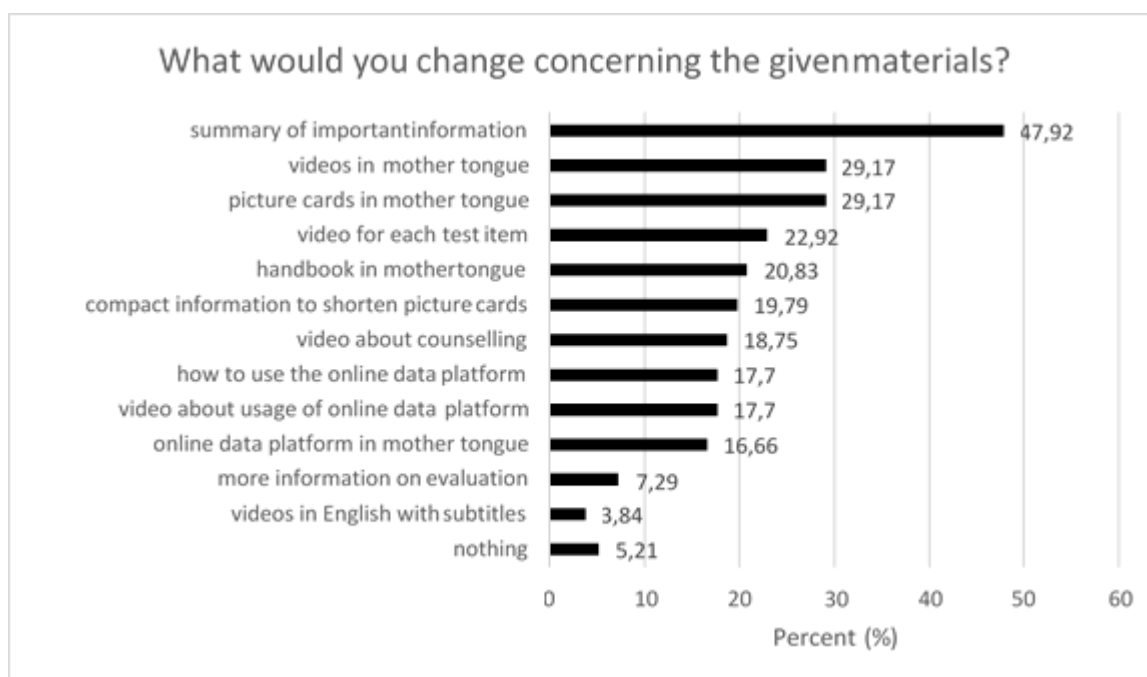
Another issue is the German choice of the word "ausreichend" as result for test profile 1. It is neither satisfactory nor motivating. Additionally, it is very negative, especially when compared to the grades given at school. Proposed alternatives are: "geschafft", "gratulieren" or "mit Erfolg teilgenommen".

There are several possible answers to the question "What expectations do you have regarding the EFB?". Since the participants may have more than one expectation, they were able to choose as many answers as preferred. The given answers are presented in Figure 27. 60,42% expect to improve the fitness awareness of their participants or their class (n=58). 48,96% expect to get to know a helpful tool for fitness testing (n=47). Another important expectation by 44,79% is to be able to identify the level of fitness of their participants or their class (n=43). 39,58% hope to increase the awareness for a healthier lifestyle (n=38). The two answers "increase in knowledge" and "tool for any adult" were chosen by 32,29% (n=31). The answers "tool to promote more fitness", "fitness improvement", and "tool for planning my training" were chosen by 29,17% (n=29). The answers "improving the health status" and "tool which is easy to handle" were chosen by 27,08% (n=27). The answers "unique feature as instructor" and "unique selling point" were chosen by 13,54% (n=14).



“tool for planning my training” were each named by 29,17% (n=28). 27,08% expect to improve the health status of their participants or their class (n=26). 26,04% expect a tool which is easy to handle (n=25). The least named categories are “unique feature as instructor” and “unique selling point” by 13,54% (n=13). The answers “A visual method to make a link between physical activity and functions in every life”, “motivation increase”, “increase the motivation of the participants”, and “nothing”, were each named once.

Figure 28 displays the required changes of the instructors concerning the given materials. Multiple answers were possible. 47,92% of the instructors ask for a summary of the most important information (n=46). 29,17% would change the language of the videos to each mother tongue (n=28). Also, 29,17% would like to have picture cards in each language (n=28). 22,92% would like to have a video for each test item (n=22). 20,83% would change the language of the handbook for instructors into all languages of the participating countries (n=20). 19,79% ask for compact information to shorten the picture cards (n=19). 18,75% would appreciate a video about counselling (n=18). The answers “how to use the online data platform” and “video about usage of the online data platform” were each chosen by 17,7% (n=17). 16,66% would change the online data platform into each mother tongue (n=16). 7,29% ask for more information on evaluation. The least named answer is “videos in English with subtitles” by 3,84% (n=4). 5,21% would change nothing, they think the materials are good as they are (n=5). Additional remarks were “change the exactness of the instrument”, “completely remove postural assessment, so it fits with current evidence, and avoids causing a nocebo effect”, “too unprofessional”, and “free forms and basic equipment”.



Summary of findings

In total, the study participants are between 18 and 86 years old with a mean of 46,59 years. Most instructors are between 50 and 59 years old (36,46%). Most of the study participants live in Germany (57,29%). Then follow Austria (22,91%) and Denmark (11,45%). Since Bulgaria (6,25%) and Slovenia (4,16%) participated in the EFB later than the other project countries, they do not have too many educated instructors so far. This is why just a few instructors participated in this survey. This still lead to a higher response rate in these countries than in the original project countries. Another reason for fewer instructors in Bulgaria and Slovenia could be that they are not as large as other countries, such as Germany. Most of the study participants are white collar workers (32,29%), public officials (23,96%), or self-employed (23,96%). Regarding the educational background, most of the instructors are educated to be an instructor in sports clubs (50%). Their experience varies. Mostly the edge zones were chosen: more than 20 years of experience (34,38%) or less than five years of experience (30,21%). The middle such as six to ten years and ten to fifteen years are only named half as often (each 14,58%).

Generally, most of the instructors got attentive on the EFB through a sports association (59,38%). Second most named answer is by a sports club (19,79%). Of the 96 participants of this survey, 60,42% have executed the EFB. The other 39,58% named reasons for not executing the badge. The result is that they do not have a group to do it with (28,95%), not enough time for execution (29,95%), or the badge is too much organization (29,85%).

Test profile 1 has been conducted by 48 instructors. They mostly conducted it less than five times (54,16%) or they conducted it five to ten times (22,92%). The most common setting in which test profile 1 has been conducted is a sports club (56,25%). This corresponds with the answer of how the instructors got attentive on the EFB. The second biggest setting is events (27,08%). This is followed by a project (20,83%). The average of participant during one test procedure is less than five (37,5%), eleven to 15 (25%), and five to ten (20,83%). This coincides with the answer before: since most instructors conduct the EFB in sports clubs, more smaller groups are tested. The age groups they tested are mainly middle age people: 51-60 years (58,33%), 41-50 years (50%), and 30-40 years (41,66%). The lowest named age group is 18-29 years (16,66%). The result of the question "Executing test profile 1, which target groups did you supervise?" is surprising. This test profile was developed for inactive people. However, the mostly named target group are moderate active people (56,25%) followed by active people (50%). Then, little active is named (41,66%). This is followed by the target group of very active people (27,08%). Lastly, the target group of inactive people is named (24,08%). This shows that the group of inactive people still cannot be reached, even if this test profile was specifically designed for this target group. One reason could be that the EFB is mostly carried out in sports clubs where mostly active people are approached. The most often named way of conducting the EFB is the group way (45,83%). Expert way was named as second frequently preferred way (33,33%). Last, the sports club way is mentioned (20,83%). Most of the instructors agree that test profile 1 of the European Fitness Badge is easy to conduct (85,43%). All of the test items are rated significantly positive, because their mean value is higher than 3,0. This means that overall, the items are easy to execute. The greatest problem that occurred during the test procedure is that the testing took longer than expected (45,83%). In addition to this, there are too many people for testing (18,75%) or a lack of volunteers to assist (18,75%). Another issue is that some items are difficult (16,66%).

Test profile 2 was conducted by 37 instructors. Up to date, it was mostly conducted less than five times (51,35%) or five to ten times (21,62%). Mostly, it was conducted in the setting of a sports club (72,97%).

This is followed by the setting of an event (35,14%), then by a project (27,03%). It was also conducted at a working place (8,11%). The average amount of participants is less than five (56,76%). Also, five to ten (13,51%) or 16 to 20 (13,51%) are named. The age group includes mainly middle-aged people: 41-50 years (73,97%), 30-40 years (64,86%), and 51-60 years (56,76%). In contrary to test profile 1, here more people of the age of 18-29 years (49,95%) are tested frequently too. This profile is designed for active people. The question regarding the target groups confirms this. Mostly active (81,08%) or very active (54,05%) people are tested. The target group of moderate active people is third most frequently mentioned target group (35,14%). Rarely little active (14,07%) or inactive people (8,11%) are tested with this test profile. Similar to test profile 1, group way is the most common way of conducting test profile 2 of the EFB (40,54%). This is followed by the expert way (35,14%) and then by the sports club way (24,32%). Most of the instructors agree that test profile 2 is easy to execute (81,08%). Also, the test items each were rated significantly positive, because every item has a mean value higher than 3,0. This means they are easy to conduct. The most frequently named problem that occurred during the testing is that the testing took longer than expected (43,24%). Then, the answer “some items are difficult” is named (29,73%). This contrasts with the rating, which reveals that the test items are easy to execute. In third place, the answer that test materials are missing, is mentioned (18,92%). Other problems that occurred are the lack of volunteers to assist during the test procedure (16,22%) and that the online data platform was not usable (16,22%).

Regarding the counselling, the instructors ask for translated materials (38,33%) as well as for transparency regarding the reference values (33,33%). Also, a counselling guide (26,66%) and a collection of exercises (26,66%) would be helpful.

The greatest strength named is that the EFB is easy to execute (63,33%). This statement is consistent with the results from the rating of the test items and the question of whether the EFB is easy to execute. The instructors also name the helpful written materials (56,66%), the overall concept (53,33%), and the detailed feedback (36,33%). Furthermore, strengths of the EFB are the scientific background (35%), only few materials are necessary (35%), and the online data platform (33,33%). The latter contrasts with what has been said about the problems that have arisen.

Some of the leading questions for this master thesis are included in the survey, in the form of a Likert scale. All of these questions are significant, because their mean value is higher than 3,0. This is why the instructors agree the EFB is helpful for test people to increase the awareness of the importance of fitness (3,84) and to motivate people to doing more for their fitness (3,91). It is also helpful to encourage people to do more for their fitness (3,96). In addition to this, it is helpful for bringing new members in the sports club or fitness centres (3,06). Lastly, the European Fitness Badge is helpful in the process of building up fitness in training groups (3,63).

The seven statements in the questionnaire that should be rated, refer to some of the leading questions of this master thesis. All of the outcomes are significant, because their mean value is higher than 3,0. This is why the instructors agree that the test people could follow my instructions easily (4,48), that the test items are accepted by test people (4,19) and that the test people are motivated throughout the test procedure (4,09). The instructors also agree that the suggestions for counselling are helpful (3,79). The handbook (3,91), picture cards (4,24), and videos (3,67) are rated as helpful.

The greatest expectation of all of the instructors is to improve the fitness awareness (60,42%). Another great expectation is to have a helpful tool for fitness testing (48,96%). The instructors also expect to

identify the level of fitness of the participants in their sports programme or class (44,79%). They further expect that the awareness for a healthier lifestyle can increase (39,58%). Next to these aspects, the instructors expect a tool for any adult (32,29%), as well as increase in knowledge (32,29%).

There are many different ideas for changing the given materials. The most frequently chosen answer is a summary of important information (47,92%). Overall, the instructors ask for translation of every given material: videos (29,17%), picture cards (29,17%), handbook (22,92%), and online data platform (16,66%).

Discussion

In the following sections findings will be discussed and described. This is why information on limitations and strengths of the conducted evaluation study will be provided and following this conclusions will be drawn. These are the foundations for recommendations based on the findings of this study.

Limitations

This study has potential limitations. These limitations are subject to bias and confounding that may have influenced the outcome of this study. Because of this, the potential limitations are stated in this chapter.

One crucial limitation was that two out of the seven participating project countries could not be considered because there were too few participations and different sports systems. This could be a risk for distortion of the results. In addition to this, a comparison of countries is not possible. It could also be interesting to discover differences between the various sports systems in order to be able to react appropriately.

There are also limitations concerning the methodology. Almost exclusively quantitative data was collected. Such data is objectively measurable and precise. This data is standardized (Kelle, Reith & Metje, 2017). This is shown in particular by the fact that only one question was asked as an open question. Quantitative methods aim for generalizability as well as objectivity and reliability of the data and procedures. In contrary, qualitative research demands the exploration of subjective perspectives of actors and the discovery of unknown cultural rules (Kelle et al., 2017). No major consideration was put on this in this paper.

Since different nations are involved in the EFB project, bias may occur due to cultural and personal issues. For one, researchers may be biased because of their cultural background. This means that perhaps not every aspect of each countries and their sports systems specific could be taken in account. One example is the question regarding gender. In Germany, not only “male” and “female” should be offered as choices but also “other”. This is not common in other languages and thus very difficult to be included in this questionnaire. For another, the study population may have answered the questions with respect to their cultural background which differs from those of the other countries.

A common bias that cannot be avoided is social desirability. This bias describes the effect that participants might choose answers that put them in a more favourable light than what they actually think. Doing so is especially easy for the participants, since they can see through the measuring principle and can thus easily figure out how they must respond (Mossbrugger & Kelava, 2012).

There are also limitations regarding the design of the questionnaire. The category “not relevant” was only offered in one out of four Likert scales. This is neither appropriate nor consistent. If offered, it should have been offered in the other Likert scales as well. This may cause distortion of one scale. In addition, this makes it difficult to compare the scales or the significance of the scales. However, since the scales were analysed without the sixth category, this does not depict a significant issue. However, it is possible that an unsuitable category was selected for the other scales, since “not relevant” was not offered as an answer. Another inconsistency can be found in the design of the answering categories concerning the question about the experience of the instructor. Two answers overlap: 6-10 and 10-15.

For someone who has 10 years of experience it is difficult to say if he or she belongs to the one or the other category. This may also affect the outcome.

Normally, online surveys exhibit a low response rate (Shih & Fan, 2009; Ruel et al., 2015). There are three reasons why many of the originally anticipated participants did not take part: non-questionability, inaccessibility, or refusal (Porst, 2000). For this study, the latter is the most likely reason, since the people can be interviewed and can also be reached out to via e-mail. However, this excludes the project country Belgium, which is no longer able to reach its educated instructors as they now have a different e-mail address. Reasons for not participating in this survey cannot be determined at this point of time. However, since it can be assumed that the given sample does not differ significantly from the missing participants, this should not greatly influence the outcome of the survey.

The chosen sample was deliberately selected. In such a sampling procedure, it can never be ruled out that unknown factors may distort the sample (Kelle et al., 2017). However, since the sample was already known in advance and the characteristics can be assigned very well, the distortion potential is very low.

Due to the fact that the population was distributed unevenly between the different project countries, no comparison between the countries could be drawn. This means that no differences between countries could be described. Retrospectively, translation into Spanish and Bulgarian was done so that more instructors would participate in the survey. Overall, six people from Bulgaria and one person from Spain answered the questionnaire. This would not have been worth all the extra time and work spent with translation. This time should rather have been spent contacting instructors more directly, which might have led to a higher response rate having been assured. This could have been done by calling the instructors.

What may also have influenced the response rate is the timing of the data collection. The link to the online survey was sent during the weeks before Christmas. Many people are in stress and hectic during this time of year and do not have any additional time to participate in surveys. Without the translations, the survey could have taken place earlier, which might have meant that more instructors could have been reached and an extension of the survey would have been avoidable. Therefore, Dillman, Smyth and Christian (2014) advise to choose a sensible time of forwarding the questionnaire.

In addition, the time of the study and the cultural environment have an influence on the significance of the general question at the beginning of the study (Kuß, Wildner & Kreis, 2018).

Strengths

Despite having some limitations, this evaluation study also has many strengths. This study was not conducted based on theory – that is, on models. In return, it fulfils its purpose of evaluating the EFB's instructor's opinion. As already described in detail, some pre-studies were done for this purpose. These served as a basis for the development of the questionnaire used. Despite the short time available, the questionnaire was developed and tested. Additionally, the data collection was carried out as well as the documentation of the evaluation.

All of this contributes to the project European Fitness Badge. Especially for the aspect of evaluation a gain of knowledge was secured. This is part of the evaluation: the evaluation of the instructors, which is a separate work package within the overall project. The questionnaire itself is very detailed and extensive and many aspects are addressed. This allows the criteria set for this evaluation to be taken into account and fulfilled. Still, it does not overwhelm the participant. A variety of data and information could thus be obtained.

It is also a positive aspect that this study could be carried out in five countries. This means that the study could be conducted in countries with similar sports systems. This makes the existing data comparable as they are based on the same principle of EFB dissemination.

This ensured that more instructors took part in the survey. Thus 27,66% of the total population answered the questionnaire. This does not seem to be very much at first, but it is a sufficient value for an online survey. Döring and Bortz (2016) say that an increased response rate can reduce the probability of bias. However, this is not a over- all assumption. It is thus possible that with a smaller study population, the overall picture and the opinion can still be described representatively (Döring & Bortz, 2016). This would have to be statistically verified for absolute certainty. Nevertheless, due to the versatility of the participants it can be assumed that the study population is sufficient for this study and the data thus usable. This is especially true for the question of problems encountered and ideas for improvements since knowledge gains could be secured.

This is accompanied by the fact that the study was translated and carried out in different languages. This is not necessarily a limitation but also a strength of this study, because thus instructors are more likely to participate in the survey if it is offered in their mother tongue. Therefore, the translation of the questionnaire has increased the response rate.

Overall, it is a helpful outcome which will be a profound basis for further steps of development of the EFB. Many insights could be gained by asking for the current status and opinion of the instructors. Further work steps and developments can be based on this.

Conclusion

Overall, the EFB is a helpful tool. The materials provided are helpful, especially the written information and the videos. In addition, the overall concept is rated as good and thus well-received. In addition to this, the personal feedback is considered positive. However, both test profiles were carried out less than five times by most instructors, which is not very much.

In summary, it can be said that the empirical part of the leading questions of this research are answered. The EFB is easy in its execution. The EFB is most frequently conducted in sports clubs. In this context, most instructors state that it is helpful to gain more members. Furthermore, it turns out that the EFB helps people to be encouraged and motivated to do more for their fitness. The awareness of the importance of fitness of the participants also increased. At the same time, the EFB supports the improvement of fitness within a training group. The suggestions for counselling are rated as good and thus as helpful. The greatest problem named with both test profiles is that the testing took longer than expected. Another common problem that occurred is that some items are difficult. This is followed by the fact that there were too many people for the testing. This in turn goes hand in hand with the lack of volunteers to assist during the test procedure. Since the EFB has not yet been executed very frequently, only a few differences between the two test profiles could be revealed. One difference is that test profile 2 seems to be performed more frequently in larger groups. This is shown by the fact that the average group size of 16 to 20 participants is mentioned more frequently than test profile 1. With regard to the problems mentioned, it can be seen that similar problems are mentioned more frequently, but they are weighted differently depending on the test profile.

Recommendations

One assumption is that the EFB is mostly carried out in sports clubs. In this setting, inactive people are seldom to be found. As a result, further consideration should be given to where and how to approach the group of inactive people. This is why it is important to collect more information on how to reach out to this target group, so that fitting strategies can be developed.

Test profile 1 was often conducted with active people even though they are not the target group of this test profile. Further investigation should prove and find reasons for this.

When talking about problems, instructors revealed that some items were difficult. Nevertheless, the rating showed that the test items are easy to execute. This seems to be in contrast to each other, which means there is a need for further research. Was one of them expressed unclear? Is what the study participants understand from a thematic point of view the same as what the researchers understand? Or does the answer from the rating relate to the point of view of the instructors, but the problems relate to the performance of the test participants? These questions should be clarified in order to counteract the problem.

Based on the problems identified in the survey, it is recommended to translate all materials and tools. This makes it easier for those who use these materials. It also increases the likelihood that the EFB will be carried out. Additionally, the satisfaction of the instructors increases.

Another aspect about the use of language is the German word for the certificate “approved”: “ausreichend”. It was mentioned a couple of times in the evaluation by different instructors. It has a negative connotation or association because it reminds the test participant of the grades in school. This word is not a good grade and therefore not motivating. It is recommended to reconsider the labelling of this certificate in German. Alternatives mentioned by the instructors are “gratulieren”, “geschafft”, or “mit Erfolg teilgenommen”.

Due to the fact that there is much ambiguity regarding the reference values and the evaluation system, it becomes clear that more clarity must be created in this respect. Instructors are interested in knowing where the values come from and how they come about. This influences their understanding and makes them more competent.

Another issue that was detected is that the online data platform was not working properly. In order to counteract this problem, it is necessary to assure the technical functionality of the online data platform. Besides technical issues, it is possible that the people using the online data platform are not very familiar with technology. Hence, a user guide would be helpful to guide the instructors through each step, which can be done on the online data platform.

The most frequently mentioned problem with both test profiles is that the implementation took longer than expected. In this context, it would be interesting to know whether this only applies when an instructor performs the EFB for the first time or whether this problem also occurs with experienced instructors. Another consideration is that the handbook for instructors mentions different time constraints than those that can actually be performed. Even though small groups were tested more frequently, it is of interest whether there is a correlation between the group size and the occurrence of the time issue. There is a need for further research about why this might be the case, or what conceivable reasons there are for the emergence of this problem. This is the only way to develop solutions, such as adapting the temporal recommendation of a test.

The same applies to the problem that there were too many participants for one testing. This might have an influence on the problem mentioned above and should be addressed in the training classes so that this problem will no longer exist in the future. However, further research is needed to find out the real causes of this problem.

Both test profiles 1 and 2 are most frequently carried out in the setting sports club. For the other settings – in particular fitness centre and workplace – there is a need to think about further implementation strategies. It is important to consider how the EFB is carried out more frequently in these settings, what framework conditions must be fulfilled for this, and how this can be promoted. That is why strategies should be developed.

Another problem mentioned and discussed is that some items are difficult. It is important to find out the referred to items and what exactly is difficult about them. At the moment, there are no concrete suggestions for improvement. It can only be said that this problem should be investigated.

Another idea mentioned by several instructors is to include the test item “planking” in the evaluation if it is tested. This exercise is considered important enough to be included.

With regard to the counselling, various aspects emerged that would facilitate the process for instructors. A counselling guide for orientation is helpful. A collection of exercises would also be helpful

so as to give direct recommendations to the participants. At the same time best practice examples are helpful. They illustrate how the counselling process works and what needs to be taken into account. Also, creating and offering a checklist is recommended.

If another evaluation of the instructors will be conducted, it should be considered whether there is a possibility to contact the instructors directly in order to ensure a higher return rate.

Furthermore, if an evaluation of this kind is to be carried out again, it is advisable to choose a different period of time. Starting a survey directly before Christmas is not recommended. It would be a good idea to do this when there are no public holidays. In addition, the question of grants from sports associations was raised. That is why there is a need to know how the EFB can be subsidised or financed. Especially for smaller sports clubs, the financial expenses for materials and staff are very high. An explanation of whether a sports association subsidises this and – if it does – how this process works, is recommended. This does not necessarily have to be included in the manual, but could rather be addressed directly during the training of the instructors.

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| 7 | Reasons for not executing EFB |
| 8 | Test Profiles executed |
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QUESTIONNAIRE

Questionnaire for instructors of the European Fitness Badge
Please choose a language.

Page 1

Dear instructor,

I would like to thank you for your willingness to participate in this study. This survey will serve as a base for further development and improvement of the EFB. It will take about 10 min to answer the questions and state your own opinion. There is no right or wrong answer.

For further information on the European Fitness Badge, please visit our website: <https://fitness-badge.eu/>

Your data will be kept in confidence and absolutely anonymous. According to Art. 4 DS-GVO only data which you provide by filling in the answers of the survey will be collected and saved. Only the authorized consortium of the European Fitness Badge is allowed to work with this data. It will not be given to third parties. Also, this data will be only used for the above state reason and for no other project. At any times: if you would like information on your data or your data to be deleted, please contact us. Otherwise it will be saved for eight years and then deleted.

Thank you very much!

Do you agree with the privacy policy?

This refers to Art. 4 no. 11 DSGVO. This article states that you voluntarily agree after being informed by the above written information.

Yes → Page 3

No → Page 2

Page 2

Since you do not agree with the privacy policy you cannot participate in this survey. Thank you very much for your time! → end of the questionnaire

Page 3

Question 1: How did you become attentive on the European Fitness Badge? Please select all for you applicable answers.

- advertisement in a magazine
- scientific journal
- online advertisement
- social media
- family, friends, acquaintances, colleagues
- sports association
- sports club
- fitness centre
- work place

- event
- project (e.g. research project)

Question 2: So far, have you executed the European Fitness Badge?

Yes → Page 5

No → Page 4

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Question 3: Up to today, why haven't you executed the European Fitness Badge? Please select all for you applicable answers.

- no group to do it with
 - not enough time for preparation
 - not enough time for execution
 - missing test materials (e.g. stopwatch, sound system, ...)
 - missing written materials
 - missing information in handbook
 - no suitable location
 - lack of volunteers to assist during the tests
 - too much organization
 - people are afraid to hurt themselves
 - managers of sports clubs or fitness centres are not interested in fitness testing
 - lack of support from my organization
 - the EFB does not fit in the class/program
 - do not know how
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Question 4: Which test profile have you executed? Please select all for you applicable answers.

- test profile 1
 - test profile 2
- Page 6

Page 6

Question 5: How many times have you executed test profile 1 of the European Fitness Badge?

Please select all for you applicable answers.

- <5
- 5 – 10
- 11 – 15
- 16 – 20
- 21 – 30
- 31 – 40
- 41 – 50
- 51 – 100
- >100

Question 6: How many times have you executed test profile 2 of the European Fitness Badge?

Please select all for you applicable answers.

- <5
- 5 – 10
- 11 – 15
- 16 – 20
- 21 – 30
- 31 – 40
- 41 – 50
- 51 – 100
- >100

Question 7: In which settings did you execute test profile 1 of the European Fitness Badge?

Please select all for you applicable answers.

- sports club
- fitness centre
- working place
- event (like city festival)
- project

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Question 8: In which settings did you execute test profile 2 of the European Fitness Badge?

Please select all for you applicable answers.

- sports club
- fitness centre
- working place
- event (like city festival)
- project

Question 9: What is the average amount of participants you tested during one event of test profile 1?

- < 5
- 5 – 10
- 11 – 15
- 16 – 20
- 21 – 25
- 26 – 50
- 51 – 75
- 76 – 100
- 101 – 150
- 151 – 200
- > 200

Question 10: What is the average amount of participants you tested during one event of test profile 2?

- < 5

- 5 – 10
- 11 – 15
- 16 – 20
- 21 – 25
- 26 – 50
- 51 – 75
- 76 – 100
- 101 – 150
- 151 – 200
- > 200

Question 11: Executing test profile 1, which age groups did you supervise? Please select all for you applicable answers.

- 18 - 29 years
- 30 - 40 years
- 41 - 50 years
- 51 - 60 years
- 61 - 70 years
- older than 70 years

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Question 12: Executing test profile 2, which age groups did you supervise? Please select all for you applicable answers.

- 18 - 29 years
- 30 - 40 years
- 41 - 50 years
- 51 - 60 years
- 61 - 70 years
- older than 70 years

Question 13: Executing test profile 1, which target groups did you supervise? Please select all for you applicable answers. The answers correspond with the activity questionnaire of the European Fitness Badge.

- inactive (daily activities like house and family care)
- little active (low activity; > 10 min 5 days/week)
- moderate active (20 min - 1-hour sports/ week)
- active (1 - 3 hours sports/week)
- very active (< 3 hours sports/week)

Question 14: Executing test profile 2, which target groups did you supervise?

Please select all for you applicable answers. The answers correspond with the activity questionnaire of the European Fitness Badge.

- inactive (daily activities like house and family care)
- little active (low activity; > 10 min 5 days/week)
- moderate active (20 min - 1-hour sports/ week)

- active (1 - 3 hours sports/week)
- very active (< 3 hours sports/week)

Question 15: Executing test profile 1, how did you conduct the test procedure? If you have used more than one of these options, please select the one that worked the best.

- expert way (every test instructor stays the whole time at one test item and the test people change from one test to another)
- sports club way (test people and instructor know the items and their ability very well and can take notes and perform the EFB together during class)
- group way (one test instructor is allocated to a group of test people and changes from one item to another)

Question 16: Executing test profile 2, how did you conduct the test procedure? If you have used more than one of these options, please select the one that worked the best.

- expert way (every test instructor stays the whole time at one test item and the test people change from one test to another)
- sports club way (test people and instructor know the items and their ability very well and can take notes and perform the EFB together during class)
- group way (one test instructor is allocated to a group of test people and changes from one item to another)

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Question 17: Executing test profile 1, is the European Fitness Badge easy to execute?

- strongly agree
- agree neutral disagree
- strongly disagree

Question 18: Executing test profile 2, is the European Fitness Badge easy to execute?

- strongly agree
- agree neutral disagree
- strongly disagree

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Page 7

Question 19: Following are the test items of test profile 1. If you have executed this profile, please rate each item on how difficult it is to execute it for you as instructor.

item	very difficult	difficult	neutral	easy	very easy
step test					
planking					
standing up with one leg					

push-up					
balancing on one leg					
jumping jacks					
sit and reach					
ABSI					
BMI					
posture					

Question 20: Following are the test items of test profile 2. If you have executed this profile, please rate each item on how difficult it is to execute it for you as instructor.

item	Very difficult	difficult	neutral	easy	very easy
step test					
walking test					
planking					
jump and reach					
push-up					
flamingo					
walking back-wards					
sit and reach					
ABSI					
BMI					
posture					

Question 21: Executing test profile 1, which problems occurred during the test procedure? Please select all for you applicable answers.

- testing took longer than expected
- too little time for preparation

- some items are difficult
- there were too many people for testing
- missing test material (e.g. stopwatch, sounds system,)
- missing written materials
- missing information on test items
- missing hints for procedure
- lack of volunteers to assist during the tests
- test people were not able to concentrate
- I was uncertain about test items
- no good WiFi connection
- injury of test person
- slim motivation by participants
- online data platform not usable

Question 22: Executing test profile 2, which problems occurred during the test procedure? Please select all for you applicable answers.

- testing took longer than expected
- too little time for preparation
- some items are difficult
- there were too many people for testing
- missing test material (e.g. stopwatch, sounds system,)
- missing written materials
- missing information on test items
- missing hints for procedure
- lack of volunteers to assist during the tests
- test people were not able to concentrate
- I was uncertain about test items
- no good WiFi connection
- injury of test person
- slim motivation by participants
- online data platform not usable

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Question 23: What would be helpful for an easier counselling? Please select all for you applicable answers.

- best practice examples
- involving managers of sports clubs, fitness centres, etc.
- translation of materials into mother tongue
- clarity about the evaluation system and how it works
- transparency regarding reference values
- collection of exercises to give participants
- counselling guide
- checklist
- other:

Question 24: Which are strengths of the European Fitness Badge? Please select all for you applicable answers.

- overall concept (profiles and fitness levels)
 - scientific background
 - education
 - easy to execute
 - helpful written materials (handbook, picture cards, videos, ...)
 - few materials necessary for testing
 - online data platform
 - motivating
 - counseling by instructors
 - feedback on counselling
 - detailed feedback (certificate and feedback)
 - materials for testing are easy to have at the sport club, fitness centre, working place or event
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Page 8

Question 25: Please rate following questions: Is the European Fitness Badge helpful...

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question	strongly agree	agree	neutral	disagree	strongly disagree
for test people to increase the awareness of the importance of fitness?					
to encourage people to do more for their fitness?					
for bringing new members in the sport club or fitness centre?					
in the process of building up fit- ness in training groups?					
to motivate people to doing more for their fitness?					

→ Page 9

Page 9

Question 26: Please rate following statements.

statements	strongly agree	agree	neutral	disagree	strongly disagree
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Test people could follow my instructions easily.					
The test items are accepted by test people.					
Test people are motivated throughout the test procedure.					
The suggestions for counselling are helpful.					
The handbook is not helpful.					
The picture cards are helpful.					
The videos are helpful.					

Question 27: Do you have ideas for improvements?

If you have ideas for improvements of the test profiles, please note to which profile you refer.

-

→ Page 10

Page 10

Question 28: What expectations do you have regarding the European Fitness Badge? Please select all for you applicable answers.

- fitness improvement of my participants/class
- improving fitness awareness of my participants/class
- improving the health status of my participants
- increase in knowledge
- increase in awareness for a healthier lifestyle
- getting to know a helpful tool for fitness testing
- a tool for any adult (despite of age and health status)
- a tool to promote more fitness
- a tool which is easy to handle
- a tool for planning my training
- improving the health status of my participants
- identifying the level of fitness of my participants
- unique selling point of the sports club/fitness centre
- unique feature as an instructor

Question 29: What would you change concerning the given materials? Please select all for you applicable answers.

- a video for each test item
 - a video about the use of the online platform
 - a video about the counselling
 - videos in mother tongue
 - video in English with subtitles
 - summary of the most important information (e.g. a checklist)
 - more information on evaluation in handbook
 - handbook in mother tongue
 - compact information to shorten the picture cards
 - picture cards in own mother tongue
 - more information on how to use the online data platform
 - online data platform in mother tongue
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Now we would like to know more about you.

- age:
- gender:
 - female
 - male

country of residence:

- Austria
- Belgium
- Bulgaria
- Denmark
- Germany
- Slovenia
- Spain

current occupation:

- manager/director
- active employee
- public official
- self-employed
- student
- trainee
- non-working (maternity leave, pension,...)
- unemployedj/ob seeking

Which qualification do you have in sports? Please select your highest level of education in sports.

- Master degree in sports
- diploma/state examination for teachers in sports
- bachelor degree in sports

- physical therapy licence/ occupational therapy licence
- apprenticeship in sports
- education to be a fitness instructor
- education to be an instructor in sport
- no education in sports
- other forms of education in sports:

How many years of experience as a sport instructor do you have?

- < 1 year
- 1 - 5 years
- 6 - 10 years
- 10 - 15 years
- 16 - 20 years
- > 20 years

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You have now completed the survey. Thank you very much for your participation and time. Your opinion helps us to improve and further develop the European Fitness Badge.
You can now close the window.