



FORSCHUNGSINSTITUT
FÜR INKLUSION DURCH
BEWEGUNG UND SPORT

“STAI VIT”

Project Evaluation

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Sport, Training, -Activities Improve Integration of Vision Impaired Trainees



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1. Project Background

The aim of the “STAI VIT”-project was to implement the pedagogical-psychological sport-concept in vocational education institutions for people with a visual impairment in the EU. The sport-concept is based on a theoretical framework relating to both pedagogical and psychological elements which are explained in more detail in the tutorial on this CD-ROM (Fuchs, Göhner & Seeling, 2007; Goy, 2005; Kurz, 2004; Siedentop, 1994). The aim of this concept is to strengthen psycho-social capabilities, to encourage continuous physical activity and to achieve a multiplier-function through the participants. It was developed by FIBS and successfully implemented during a national project (FIBS, 2016) in Germany.

In the “STAI VIT”-project a curriculum was developed in order to teach the sport-concept to trainers who work with students with a visual impairment. After trainers from all participating institutions were instructed and familiar with the concept, sport courses for people with a visual impairment were carried out in each of the three partner institutions. Also, further trainer-courses were organized to reach more interested trainers.

The trainer-courses were evaluated by all participants using questionnaires mainly comprising closed questions. Also, the sport groups were evaluated using questionnaires mainly comprising closed questions at three times of measurement in order to examine how participation in sport activities that are conducted according to the sport-concept can affect the physical activity, self-efficacy and quality of life of participants with a visual impairment.



2. Evaluation of the Train-The-Trainer-Courses

In order to implement the sport-concept that was developed for this project, four Train-The-Trainer-Courses were held of which one took place in each participating country. There were a total number of 33 participants (Germany 6, Italy 9, Romania 14, Bulgaria 4). The first course was held in Germany for the trainers of all three participating institutions. Afterwards, they organized the additional Train-The-Trainer-Courses in their own countries in order to disseminate the content of the sport-concept and to address more trainers who work with people with a visual impairment.

Each of the Train-The-Trainer-Courses was evaluated by all participants. The results of the evaluation are shown below. Participants were asked to fill out a questionnaire with 24 items. It included 21 closed questions regarding the instructor, the seminar content, the presentation quality and the structure of the seminar as well as 3 open questions regarding strengths and weaknesses of the course.

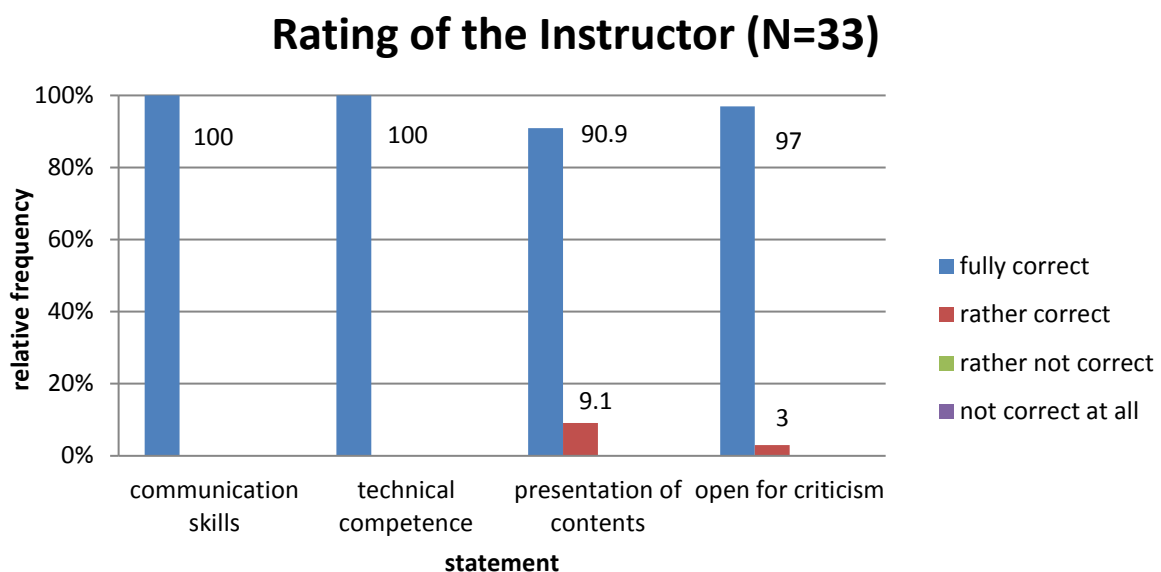


Figure 1: Rating of the Instructor

The first set of questions was related to the rating of the instruction. Participants of all courses rated their instructor very positively regarding their communication skills, technical competence, the presentation of contents and their openness for criticism (Figure 1).

Rating of Seminar Content (N=33)

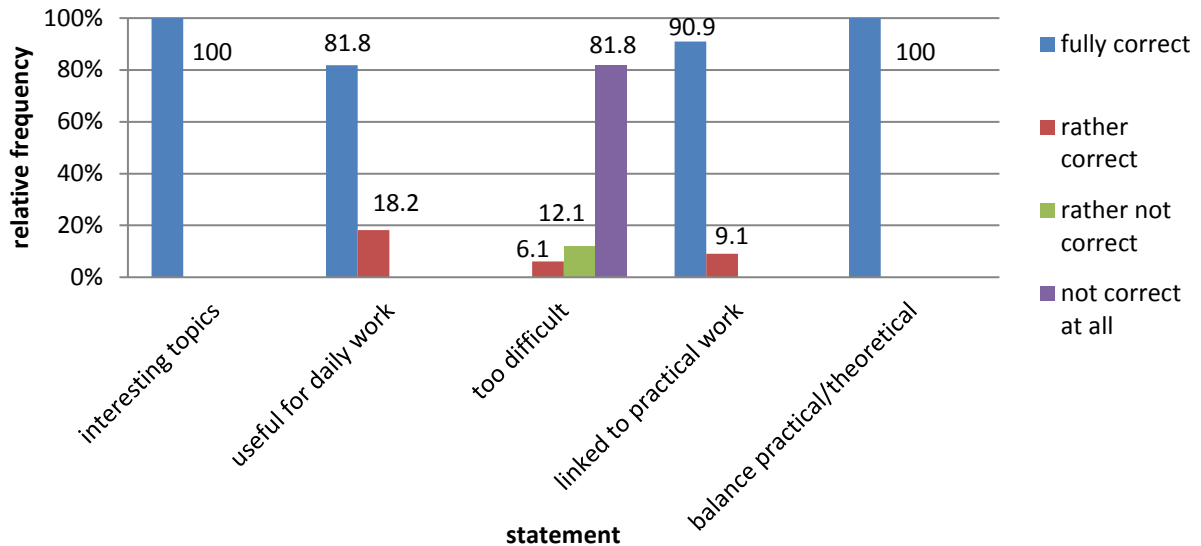


Figure 2: Rating of Seminar Content

The rating of the seminar content was very positive in all courses. 100% of all participants found the topics very interesting and nearly all found them very useful for their daily work. The content was not considered too difficult by most participants, while they felt they could link the content to their practical work. Also, the courses' balance between theoretical and practical contents was rated very positively by all participants (Figure 2).

Rating of Presentation (N=33)

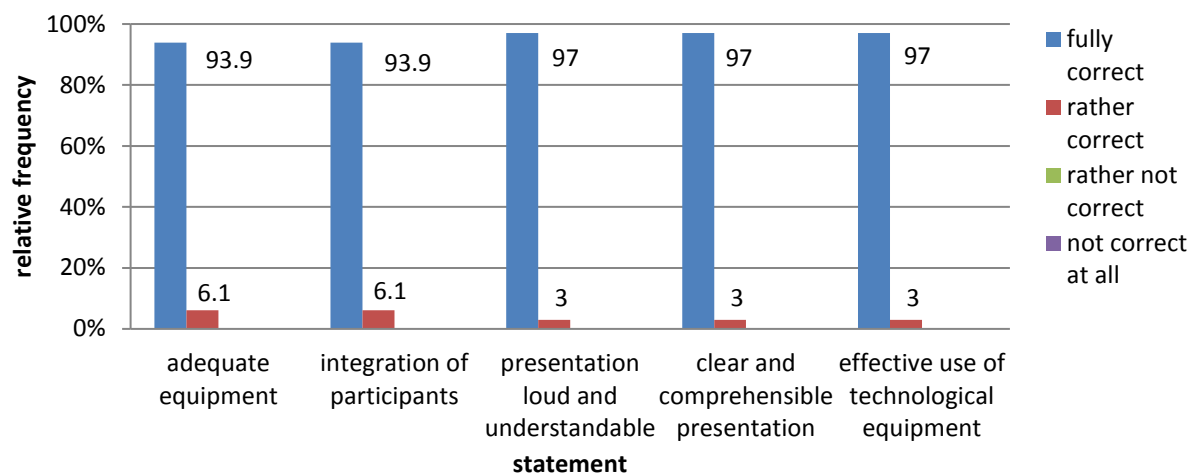


Figure 3: Rating of Presentation

Participants also rated the presentations. The available equipment, the integration of participants into the seminar, the quality of the oral presentation, the quality of the

presented contents and the use of technology were rated very well by nearly all participants (Figure 3).

Rating of Seminar Structure (N=33)

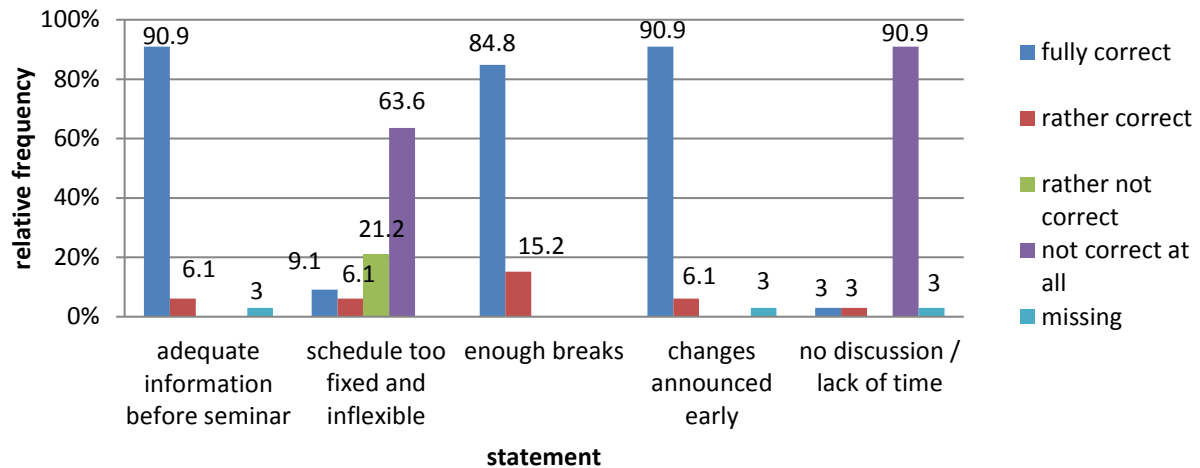


Figure 4: Rating of Seminar Structure

Most participants rated the amount of information that was given before the seminar very positively. For some participants, the schedule of the course was too fixed and inflexible, while most were satisfied. The amount of breaks was rated positively as was the announcement of changes. Few participants felt like there was not enough time for discussion, while most seemed very satisfied with the time structure of the courses (Figure 4).

Below are the mean values of all participants regarding the four different categories of the questionnaires (worst – 0, best – 3):

Group of statements	Mean value (N=33)
Rating of the instructor	2,97
Contents of the seminar	2,89
Rating of presentation	2,96
Structure	2.79

Table 1: Mean values for questionnaire statements

Two participants mentioned weaknesses. They raised the desire to include more people with visual impairments into the course and stated that some of the participants were too fixated to their dedicated sports. The strengths that were mentioned were the direct involvement of participants, a lot of practice activities, a lot of new and interesting and useful information, and the relation to the everyday work of the participating trainers (Table 1).

Fulfilled Expectations (N=33)

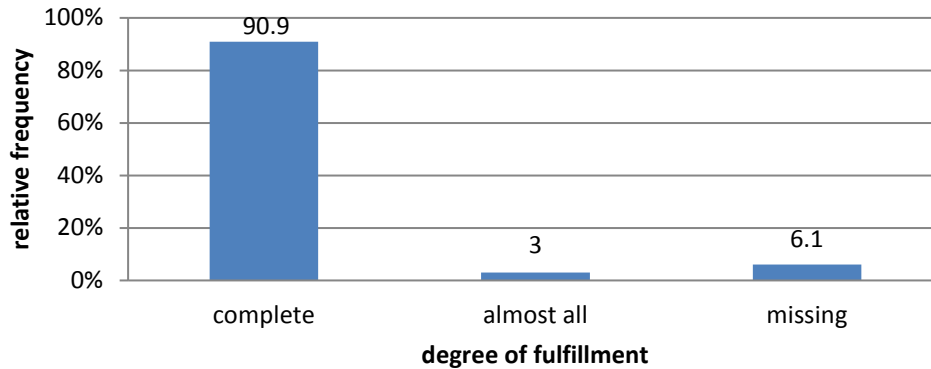


Figure 5: Fulfilled Expectations

90% of all participants stated that their expectations were completely fulfilled showing great satisfaction with the course and its contents (Figure 5).

Overall Rating (N=33)

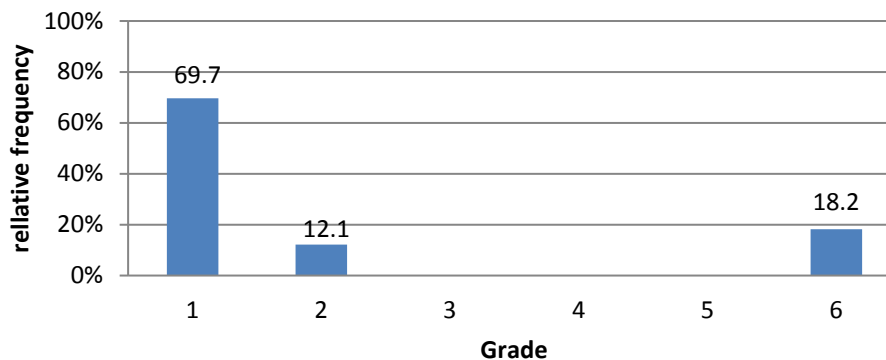


Figure 6: Overall Rating

For an overall rating on a scale from 1 (best) to 6 (worst), nearly 70% of all participants rated the seminar with grade 1 and 12% rated grade 2. 18% rated grade 6 which in this case was the worst possible rating. This scale was derived from the German school grading system in which 1 is the best grade and 6 is the worst grade. However, the scale of nearly all other questions was contrary to this, as 0 was the worst rating and 3 was the best. This might have caused confusion among the participants. Due to this ambiguity the given answers to this question cannot be clearly interpreted (Figure 6).

The mean overall rating of the course was 2.03 on a scale from 1 (best) to 6 (worst). However, as discussed above, some participants might have misunderstood the scale for overall rating.



3. Evaluation of the Sport Activities

First, the sample will be specified with regard to sex, age, relationship, visual impairment and BMI. Afterwards, the results of the evaluation will be presented examining the participants' physical activity, their self-efficacy and quality of life over the course of the project.

A total of 30 people participated in the project, 10 of which were women and 20 men. The 30 participants came from three different European countries: eleven participants each from Romania and Italy and eight from Bulgaria. The mean age was 30 years (SD: 11.49). 17 participants stated that they were not in a relationship. Five participants lived in a relationship, while three are married. Five participants did not provide information regarding their relationship status.

Time of Impairment (N=30)

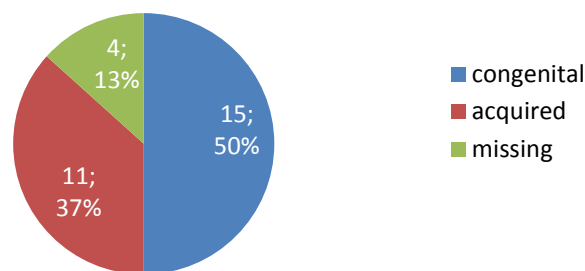


Figure 7: Time of Impairment

15 participants have a congenital visual impairment. 11 participants acquired their visual impairment later on in life, while 4 participants did not provide information regarding their time of impairment (Figure 7).



Visual Impairment According to WHO (N=30)

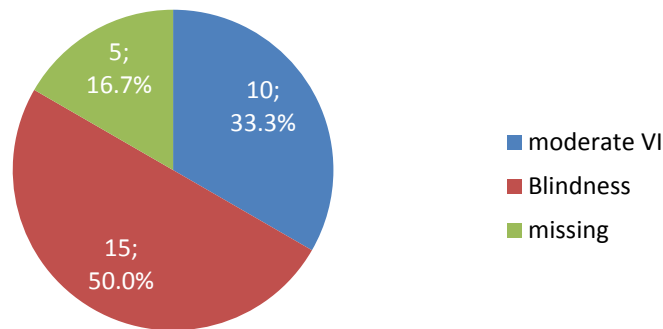


Figure 8: Visual Impairment According to WHO

The mean visual acuity of all participants is 5.16%. According to the WHO visual impairment classification ten participants have a moderate visual impairment while 15 are blind. Five participants did not provide details regarding their visual impairment (Figure 8).

BMI Mean Values

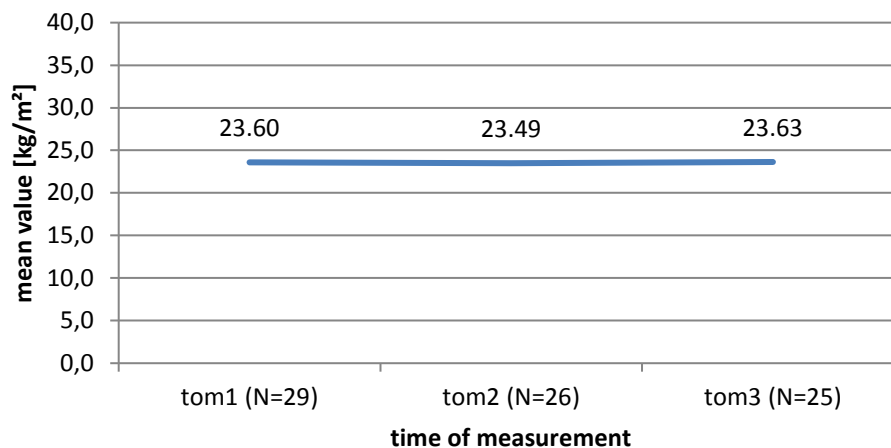


Figure 9: BMI Mean Values

The BMI mean value of all participants only changed very little over the course of the project. While it decreased from 23.6 to 23.49 from the first to the second time of measurement (tom) it increased to 23.63 at the third time of measurement (Figure 9).

Categories of BMI (N=30)

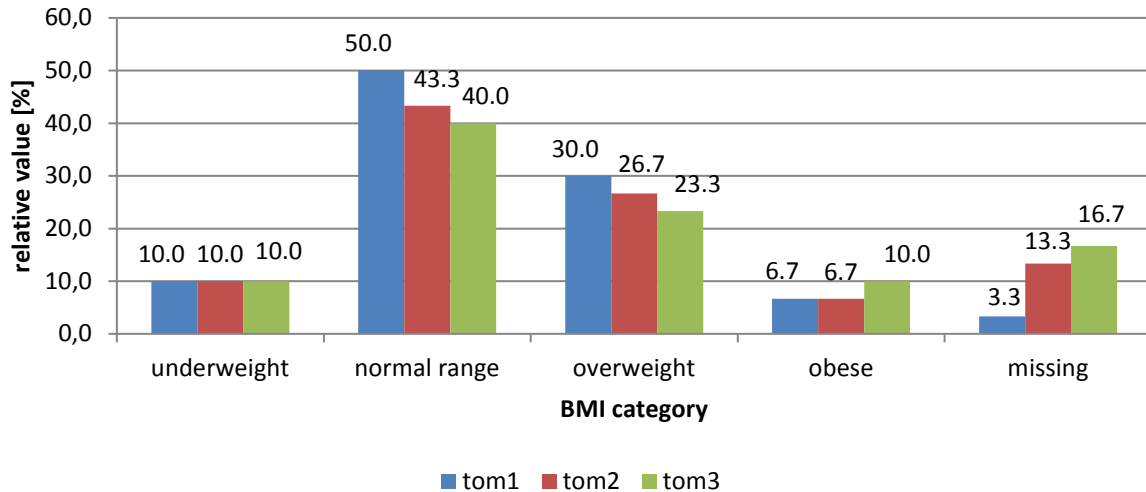


Figure 10: Categories of BMI

The numbers of participants in each category of BMI shifted over the course of the project. The numbers of people with a normal-range BMI and overweight people decreased while the number of obese participants increased very little. Also, the number of missing values increased over all three times of measurement (Figure 10).

Categories of Physical Activity (N=30)

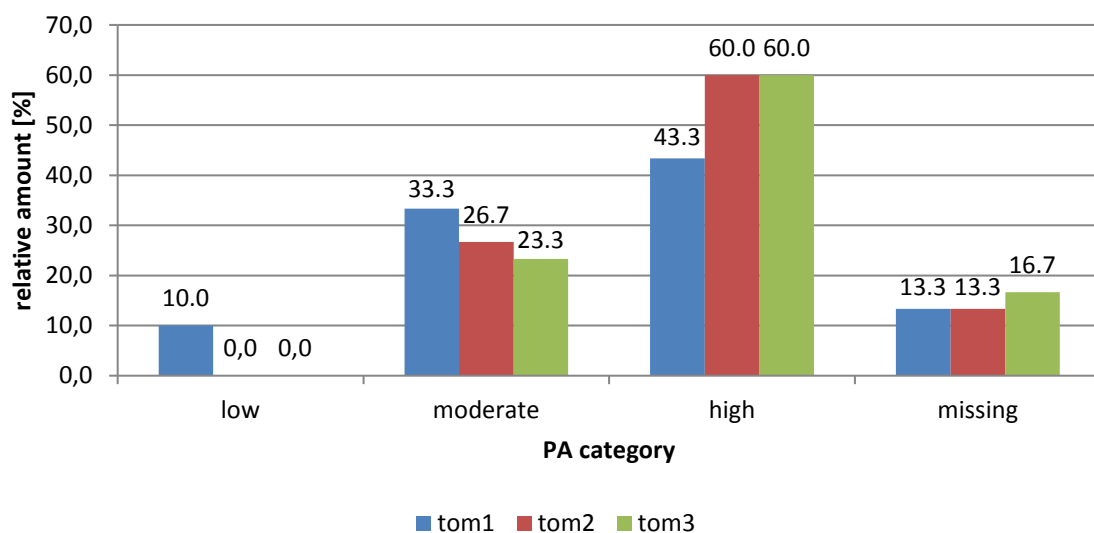


Figure 11: Categories of Physical Activity

While there were some participants with low physical activity at the first time of measurement, there were none at the second and third time of measurement. Also, the number of participants with high physical activity increased from the first to the second time of measurement. However, the number of participants with moderate physical activity

decreased over the course of the project and the number of missing values rose slightly (Figure 11).

Overall, the physical activity of the participants increased over the course of the project. The mean value increased significantly ($p=.004$) from 4573 MET-min/week at the first time of measurement to 5695 MET-min/week at the second time of measurement and slightly decreased again to 5064 MET-min/week at the third time of measurement. All mean values stand for high physical activity.

Self-Efficacy Mean Values

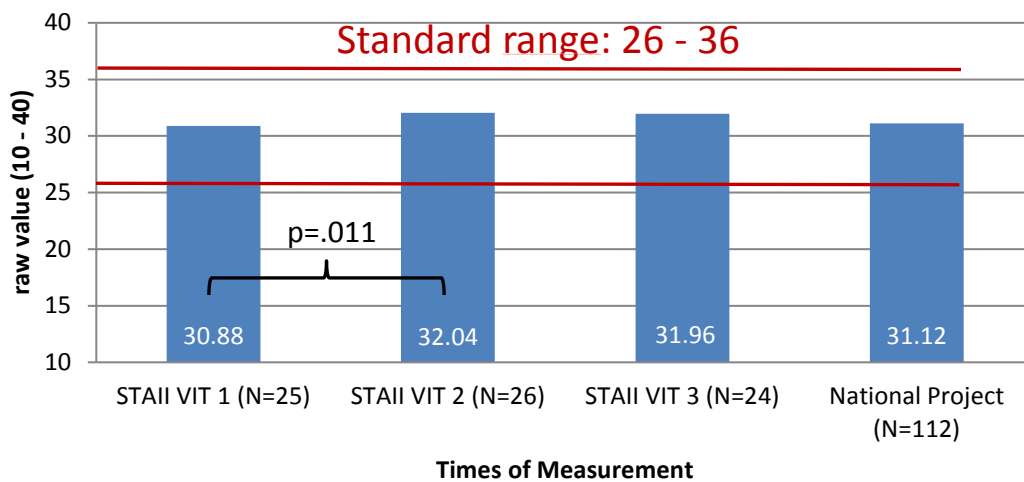


Figure 12: Self-Efficacy Mean Values

Mean values for the participants' self-efficacy expectations increased significantly ($p=.011$) from the first to the second time of measurement and slightly decreased again from the second to the third time of measurement. All mean values are comparable to results of a similar national project conducted in Germany and lie inside a standard range of German reference values (Figure 12).

Self-Efficacy Mean Value by Physical Activity tom 1

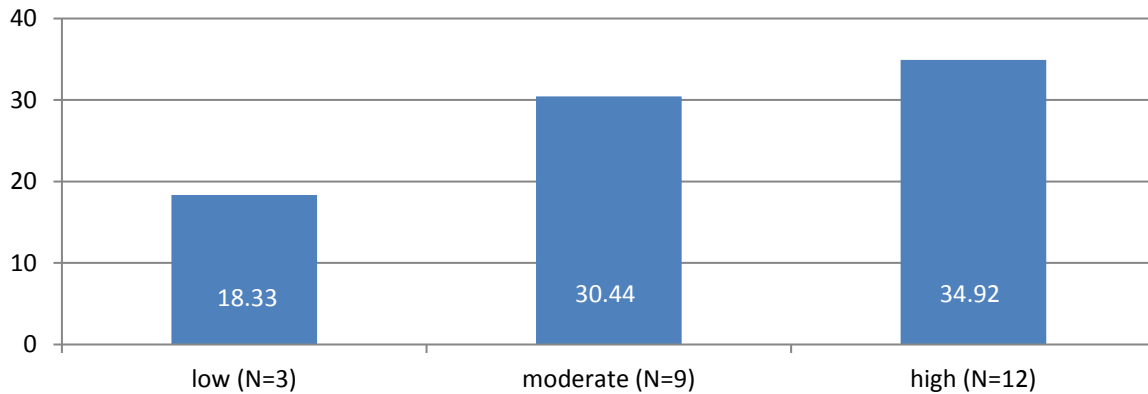


Figure 13: Self-Efficacy Mean Value by Physical Activity tom 1

At the first time of measurement, self-efficacy mean values of participants with high physical activity were higher than those of participants with moderate or low physical activity (Figure 13).

Self-Efficacy Mean Value by Physical Activity tom 2

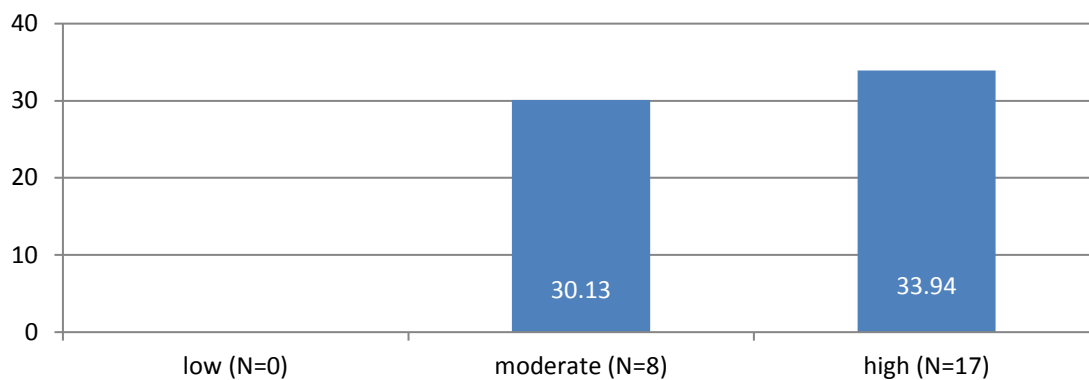


Figure 14: Self-Efficacy Mean Value by Physical Activity tom 2

There were no participants with low physical activity at the second time of measurement. Similar to the first time of measurement, participants with high physical activity had higher self-efficacy mean values than participants with moderate physical activity (Figure 14).

Self-Efficacy Mean Value by Physical Activity tom 3

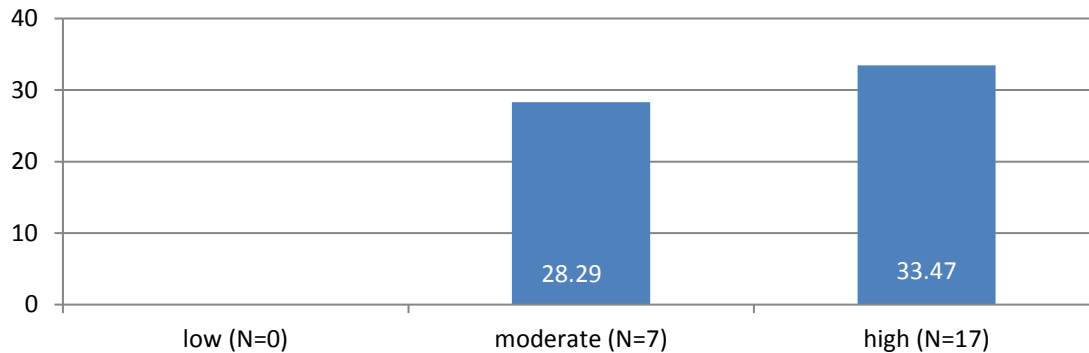


Figure 15: Self-Efficacy Mean Value by Physical Activity tom 3

As for the first two times of measurement, participants with high physical activity also showed higher self-efficacy mean values than participants with moderate physical activity (Figure 15). The self-efficacy mean values of each physical activity category did not change significantly over the course of the project.

Quality of Life

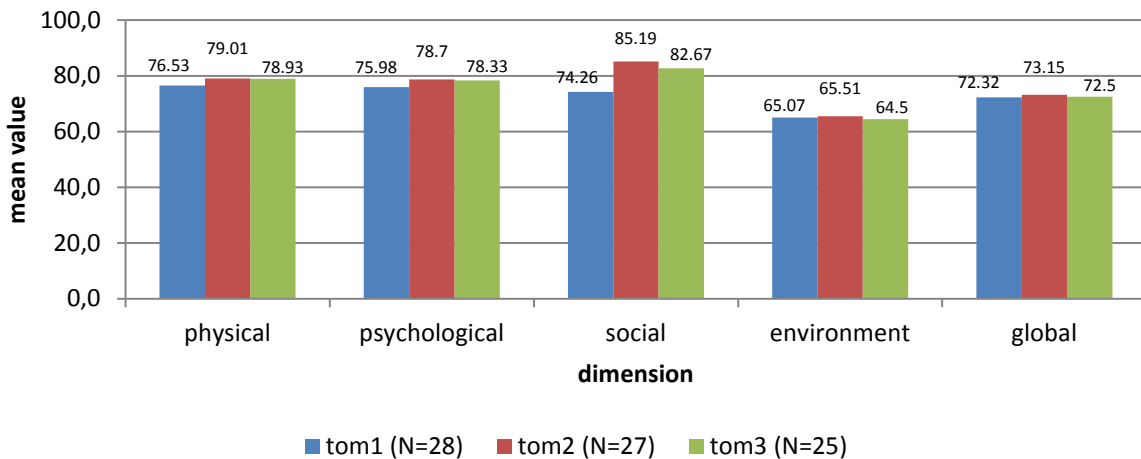


Figure 16: Quality of Life

Quality of life was assessed in five different categories using the WHOQOL-BREF questionnaire: physical, psychological, social, environmental and global quality of life. Overall, mean values remained steady in most categories while improvements can be seen regarding social quality of life (Figure 16).

QOL Physical

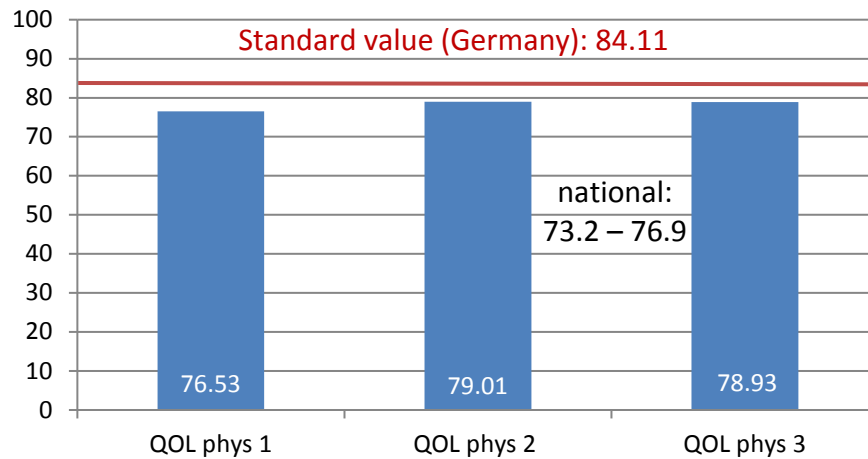


Figure 17: QOL Physical

Mean values for physical quality of life did not change significantly over the course of the project. Values of all three times of measurement are comparable to the results of the German national project but they are below the standard value of the German general population which, however, does not only include people with a visual impairment (Figure 17).

QOL Psychological

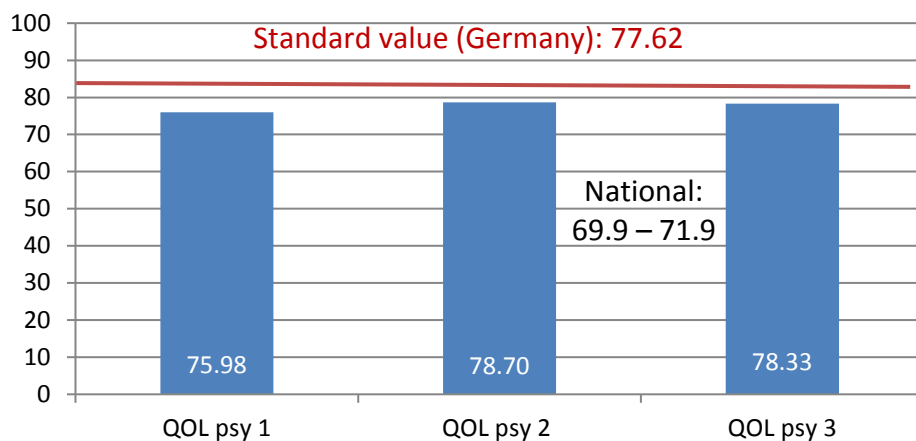


Figure 18: QOL Psychological

Similar to physical quality of life, mean values for psychological quality of life did not change significantly over the course of the project. Mean values of all three times of measurement are above values of the German national project but below the standard value of the German general population (Figure 18).

QOL Social

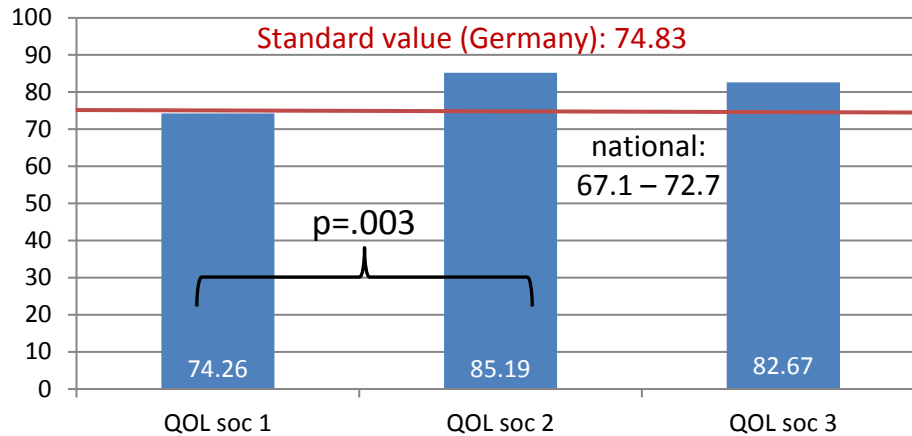


Figure 19: QOL Social

Mean values for social quality of life increased significantly ($p=.003$) from the first to the second time of measurement. Also, all mean values are above values of the German national project and similar to or higher than the standard value of the German general population (Figure 19).

QOL Environmental

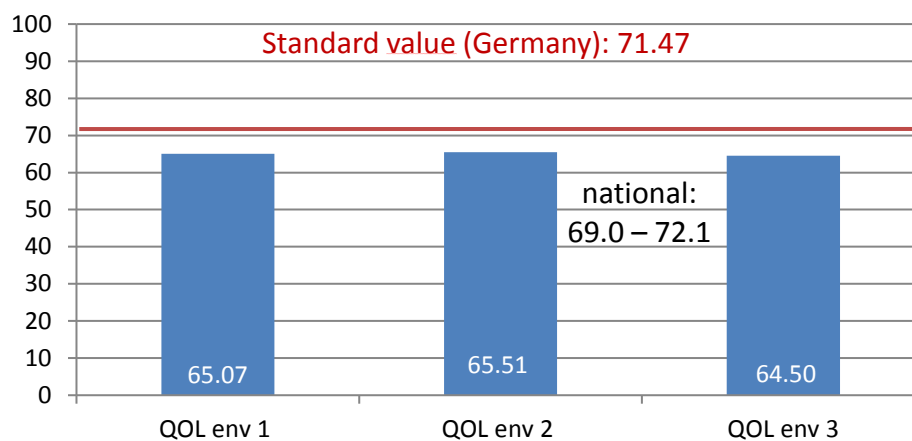


Figure 20: QOL Environmental

Mean values for environmental quality of life are below values of the German national project and also below the standard value of the German general population. The values did not change significantly over the course of the project (Figure 20).

QOL Global

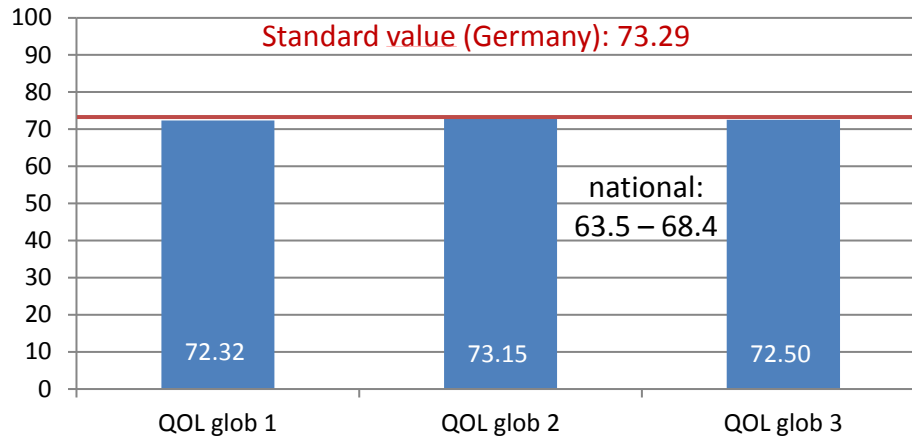


Figure 21: QOL Global

Mean values for global quality of life did not change significantly over the course of the project and did almost not change at all. However, they are higher than the values of the German national project and comparable to the standard value of the German general population (Figure 21).

Quality of Life in Romania

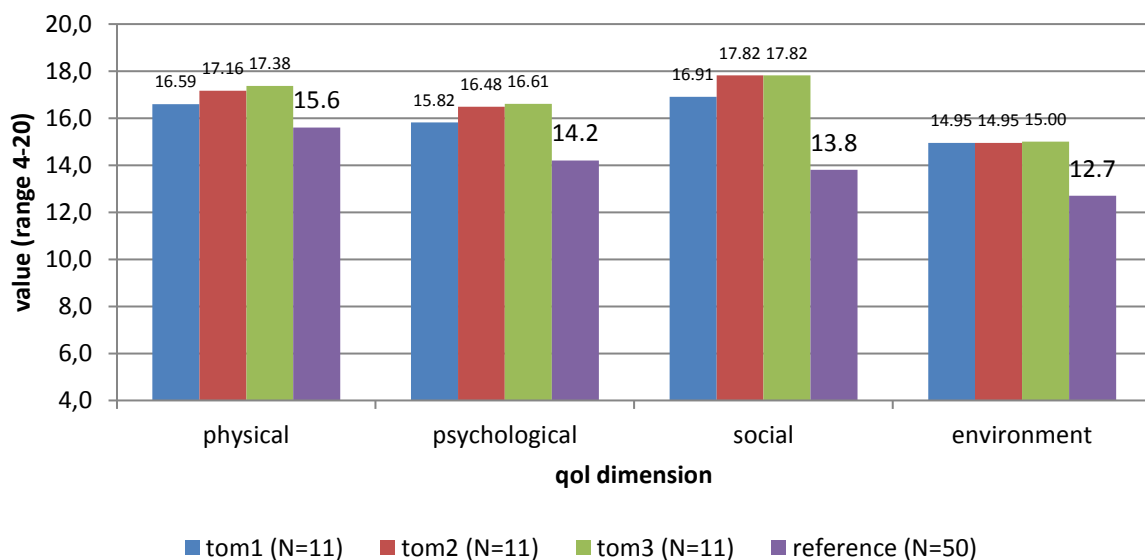


Figure 22: Quality of Life in Romania

Regarding the Romanian participants, all mean values are significantly higher than national reference values of the general population ($p=.003-.008$) except for the physical quality of life mean value at the first time of measurement. The greatest difference between participants' values and reference values can be found in social quality of life. There was a significant increase of both psychological ($p=.026$) and physical ($p=.011-.016$) quality of life mean values over the course of the project (Figure 22).

Quality of Life in Italy

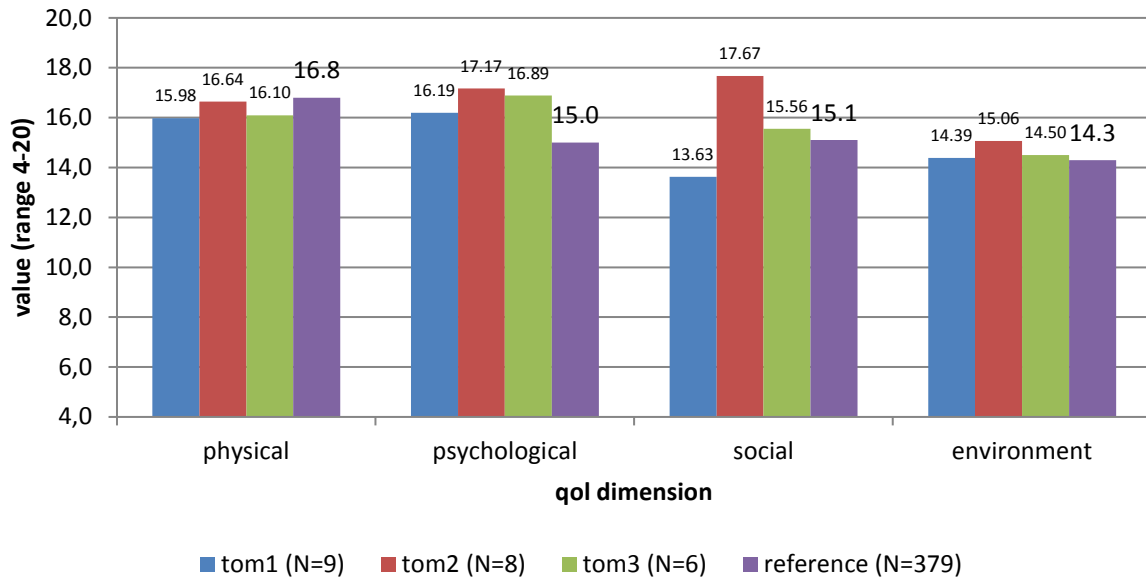


Figure 23: Quality of Life in Italy

The mean values of Italian participants were significantly higher than national reference values of the general population for social ($p=.016$) and psychological ($p=.035$) quality of life at the second time of measurement. Mean values for social quality of life increased significantly from the first to the second time of measurement ($p=.038$). Except for psychological quality of life, mean values of all quality of life categories are higher than the national reference values at least at one time of measurement (Figure 23).

Quality of Life in Bulgaria

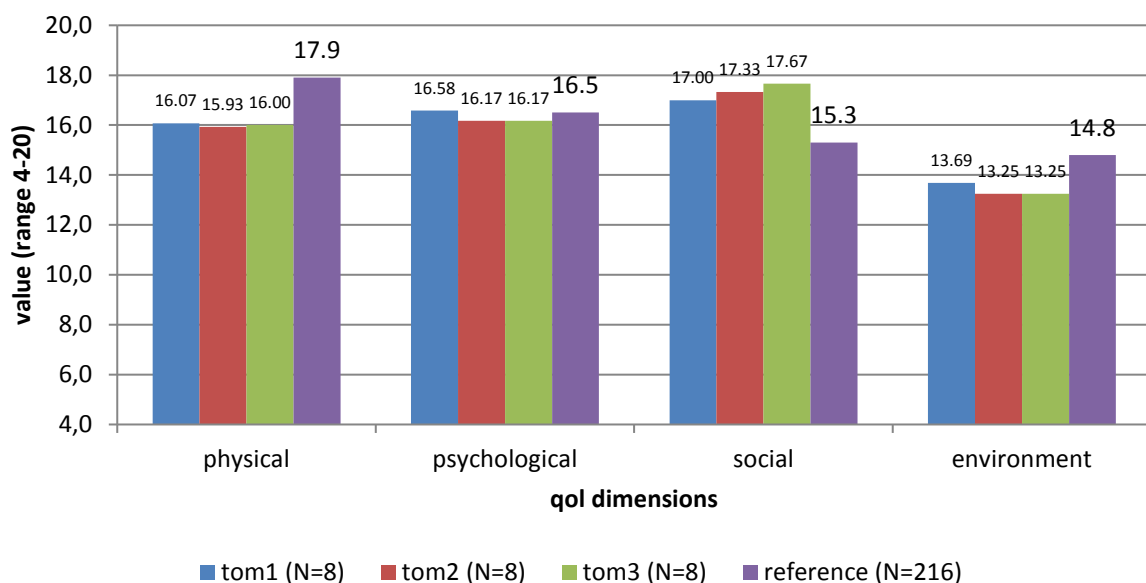


Figure 24: Quality of Life in Bulgaria



Similar to other participants, Bulgarian participants’ mean values for social quality of life were significantly higher than national reference values at all three times of measurement ($p=.011-.033$). However, mean values for physical quality of life were significantly lower than the Bulgarian reference values at all three times of measurement ($p=.011$). Mean values for psychological and environmental quality of life are similar to or slightly below national reference values (Figure 24).

The statistics show that quality of life mean values of participants from all three countries remained constant or increased over the course of the project but did not decrease significantly. In many cases, participants’ quality of life mean values were above corresponding national reference values. Especially the development of social quality of life mean values stands out as they increased significantly over the course of the project and were significantly higher than national reference values in all three countries at least at two times of measurement.

QOL by Physical Activity tom 1

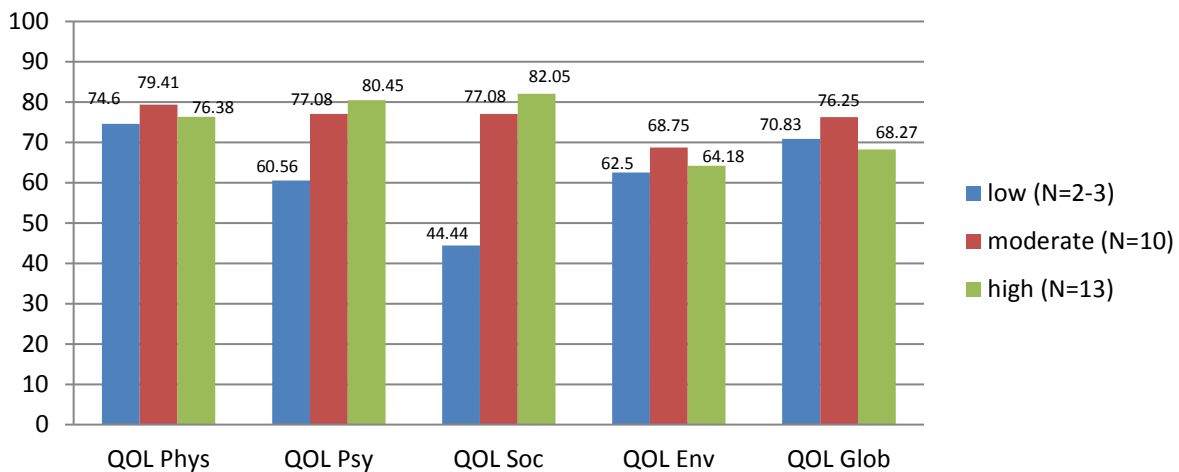


Figure 25: QOL by Physical Activity tom 1

The graph shows the participants’ quality of life mean values sorted by their physical activity category at the first time of measurement. Quality of life mean values of participants with low physical activity are always lower than those of participants with moderate physical activity. This is especially notable for social quality of life (Figure 25).

QOL by Physical Activity tom 2

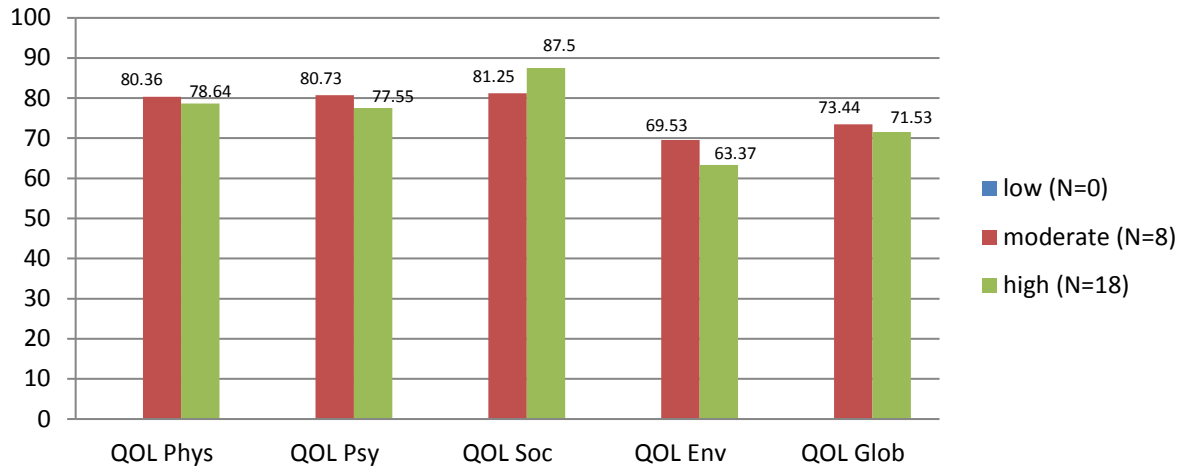


Figure 26: QOL by Physical Activity tom 2

The graph shows the participants' quality of life mean values sorted by their physical activity category at the second time of measurement. What stands out is that quality of life mean values for participants with high physical activity are not always higher than those of participants with moderate physical activity. This is only the case for social quality of life (Figure 26).

QOL by Physical Activity tom 3

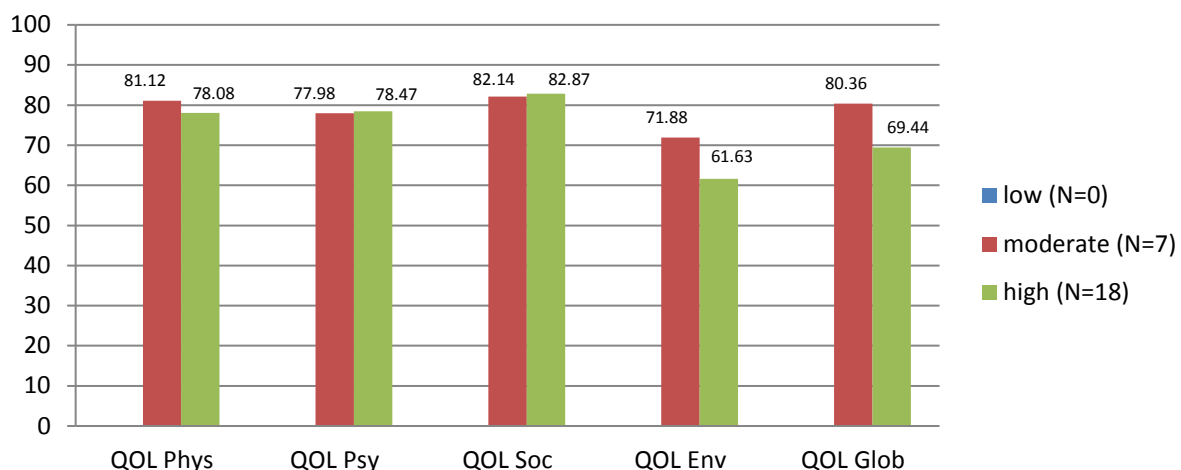


Figure 27: QOL by Physical Activity tom 3

The graph shows the participants' quality of life mean values sorted by their physical activity category at the third time of measurement. Similar to the second time of measurement, mean values of participants with high physical activity do not always exceed those of participants with moderate physical activity. Social quality of life is the only category in



which mean values of participants with high physical activity always exceed those of participants with moderate or low physical activity (Figure 27).

Summarizing observations:

- Participants' physical activity increased over the course of the project.
- Participants' self-efficacy values improved over the course of the project.
- Participants with high physical activity also have higher self-efficacy mean values than those with moderate or low physical activity.
- Quality of life mean values improved or remained constant in all categories.
- Mean values of social quality of life were significantly higher than national reference values at least at two times of measurement in all three countries.
- Participants' social quality of life mean values increased significantly over the course of the project.



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