



User manual

For usage of the MO|RE data platform

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Responsible for the content is the project group MO|RE data of the Institute of Sports and Sports Science at the Karlsruhe Institute of Technology. For questions and suggestions, please use the contact on our website.

Content

1. Reading aid: Manual.....	3
2. General information on MO RE data.....	4
2.1. MO RE data in the data life cycle.....	5
2.2. What data is present on MO RE data?	6
3. Access to MO RE data.....	8
3.1. Technical requirements.....	9
3.2. Registration with MO RE data	10
3.3. Logging on to MO RE data	11
3.4. Logging out of MO RE data.....	12
3.5. Change password/ Forgotten password	13
4. Data preparation for upload in MO RE data.....	14
5. Submission in MO RE data.....	16
5.1. Data upload procedure up tp submission	17
5.2. User profile: submission.....	19
5.3. Data mapping	20
5.4. Upload of further data	21
5.5. Metadata input.....	22
5.6. Status check and completion of submission	24
5.7. Special features for aggregated data sets.....	25
5.8. Deleting a data set.....	26
6. Datenqualität.....	27
6.1. Automatic filters for data quality review	28
6.2. Review process by the editorial board.....	31
7. Search on MO RE data.....	32
8. Additional Information on the MO RE data project	34
8.1. Organization	35
8.2. MO RE data cooperation partners.....	36
8.3. Digital Object Identifier (DOI®).....	37
8.4. Licensing of MO RE data.....	38
8.5. Data protection	39
9. Glossary	40

1. Reading aid: Manual

On the one hand, this manual serves as an information document for detailed information about the MO|RE data project, including its background and possible uses. On the other hand, both data users and data providers can use the manual directly as a guide for using the platform. For this, we recommend reading chapter 5-7.

The manual refers to two roles: data providers, who submit their own data to MO|RE data for public use, and data users, who use data sets published on MO|RE data.

In addition to the manual, you will find further support materials, including video tutorials on the individual usage functions/areas, on our homepage:



2. General information on MO|RE data

MO|RE data is a discipline-specific research data repository in which collected research data of sports motor tests are published, prepared for citation, and archived.

The service is primarily aimed at the entire sports science community to share, use, and cite data in research papers using the Digital Object Identifier (DOI®). Overall, however, it is open to all data providers and data users with sport motor test data. The platform offers the following functions: Data search, data upload with a data quality check by an editorial board team and DOI award after successful publication of the data, and data archiving. All data published on MO|RE data are automatically stored on a permanent repository of the Karlsruhe Institute of Technology (KIT) at the Steinbuch Centre for Computing (SCC). For published data packages no retention period has to be selected, it is unlimited. KIT guarantees an actual retention of at least 10 years.

2.1. MO|RE data in the data life cycle

In order to be able to manage collected research data efficiently, a data management plan is often drafted while a research project or study is still in the planning phase. It helps to structure the handling of data during and after the project. Many funding agencies, especially public ones, even require that a data management plan be drafted and submitted as part of a proposal.

You can find out more about the components of a data management plan on the Internet at <https://datamanagement.hms.harvard.edu/plan-design/data-management-plans>.

One of the most important components of a data management plan is data archiving and publication. The subject-specific repository MO|RE data is perfectly suited for this purpose, as it was established for specific requirements of the subject community from sports science. Within the data cycle in Figure 1, MO|RE data is located under data storage and release.

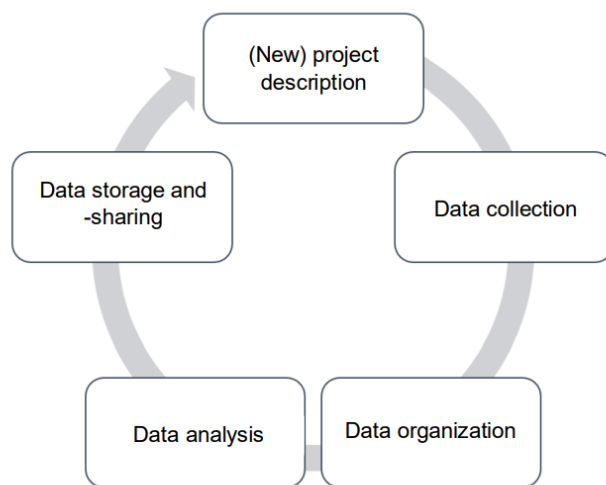


Figure 1: Simplified data cycle within a project (own representation).

After the publication of the data, for example via MO|RE data, other data users can use the data set to work on and conduct new, further studies and questions that would not initially be possible without this existing preliminary work. This closes the circle of the data cycle.

2.2. What data is present on MO|RE data?

MO|RE data is a specific repository for research data of sports motor tests. These data can be uploaded as raw data (RAW) or in aggregated form (AGG).

The following motor test items were selected due to their widespread use, scientific establishment, as well as the large already existing database and long-term international use and experience in large studies:

Table 1: Testitems in MO|RE data

Testitem	Test code	Test implementation	Unit
6-minute Run	6min	Cover as far a distance as possible around a volleyball court (lap length 54 m) or on a 400-meter track within 6 minutes.	Meters
Push-Ups	PU	Start in prone position with hands behind back, push-up position, one hand touching the other, push-up position, prone position with hands behind back	Amount in 40 sec
Sit-Ups	SU	Supine position, legs fixed and fingers at the temples, torso upright	Amount in 40 sec
Standing Long Jump	SLJ	Jump forward as far as possible from a standing position with a two-legged takeoff	Centimeters
20m Dash	20m	From the high start	Seconds
20m Dash (light-barrier)	20m (lb)	From the high start	Seconds
Jumping Side-ways	JumpSw	In a marked field (100 x 50 cm) jumping sideways back and forth over a center line for 15 seconds.	Amount of jumps in 15 seconds
Balancing Backw	BalBw	Balancing backwards on 300 cm long and 6 cm, 4.5 cm and 3 cm wide beams	Amount of steps
Stand and Reach	St&R	In standing position, bend the upper body forward downward as far as possible with legs extended	Centimeters
Cooper Test	12min	Cover as far a distance as possible within 12 minutes	Meters
Shuttle Run	SRun	20 m increase pendulum run	Stages, Level
2-km-Walking-Test	2kmWalk	Complete a flat 2 kilometer course as quickly as possible using the walking technique, pulse measurement.	Seconds
Danish Step Test	DStep	Step up and down a stepper in a given rhythm	VO _{2max} (ml/min/kg)
Handgrip	Hgrip	Hand strength measurement with hand dynamometer	Kilogram
Medicine Ball Push	MED	Pushing a 1 kg medicine ball as far as possible	Meters
Jump and Reach	J&R	From a standing position, jump up as high as possible and touch the wall at the highest point	Centimeters
Walk-Back (time)	WalkB-t	Walk a distance of 6 meters backwards as fast as possible (if 6m mark is not reached, the furthest distance achieved is measured)	Seconds
Walk-Back (distance)	WalkB-d	Walk a distance of 6 meters backwards as fast as possible	Meters
Slalom Run	SIRun	Run through the obstacle course as fast as possible	Seconds
Single Leg Stand	1LegSt	60 seconds single-leg stand on a narrow rail (3 cm)	Error points
Target Throw	TargT	Throw a tennis ball into a target square	Hits

Throw and Catch	T&C	Throw a ball through the legs to the wall and catch it again	Quality rating (from 10 throws)
Sit and Reach	Si&R	In the long seat, bend the upper body down as far as possible to touch the toes with the fingers	Centimeters

In the brochure "[KOMET - Kompetenzzentrum motorische Tests. Hintergrund & Testbeschreibungen](#)" you will find the detailed descriptions of the test items and the corresponding test batteries and background information.

Only test items that were administered according to exactly these protocols and have the corresponding units can be mapped (cf. Chap. 5.3). Data from other test items can also be published in MO|RE data without the corresponding mapping of the test item. However, an exact description of the test execution should be given within the metadata (Abstract field). In addition, we recommend assigning a unique variable name (e.g. push-up_30Sec, single-leg_5cm).

In addition to the data of sports motor tests, anonymized data of test persons and constitution values can be mapped and published within a data set in MO|RE data. Additional data or, for example, an exact age (with decimal places) can also be published in MO|RE data, without associated mapping. We recommend creating two variables with unique names, e.g. age_years and age_exact, in order to use MO|RE data optimally and not to reduce the quality of the datasets.

Table 2: Other variables in MO|RE data that can be mapped

Variable	Comment	Unit
Age	Age in whole years	Years
Gender	Male, Female, Diverse	m, f, d
Weight	Bodyweight	Kilogram
Height	Body height	Centimeters
BMI	Body-Mass-Index (Body weight in kg/Body height in cm ²)	BMI-Value
Waist size		Centimeters

Other additional data (e.g., results from questionnaires, activity behavior, etc.) can be uploaded simultaneously within the data set, but not mapped.

If a variable is not mapped, this means that this data cannot be linked within MO|RE data (it cannot be searched for specifically in the search function). However, the data can be viewed and used by other data users. A careful and detailed description of these additional variables is therefore mandatory.

3. Access to MO|RE data

You can access MO|RE data either directly by entering the URL in your web browser (<https://motor-research-data.de/>) (cf. Figure 2) or by accessing the homepage of the Institute of Sport and Sport Science at the Karlsruhe Institute of Technology (<https://www.ifss.kit.edu/more/english/index.php>). If you access via the homepage, you will be redirected to MO|RE data via a link (cf. Figure 3).

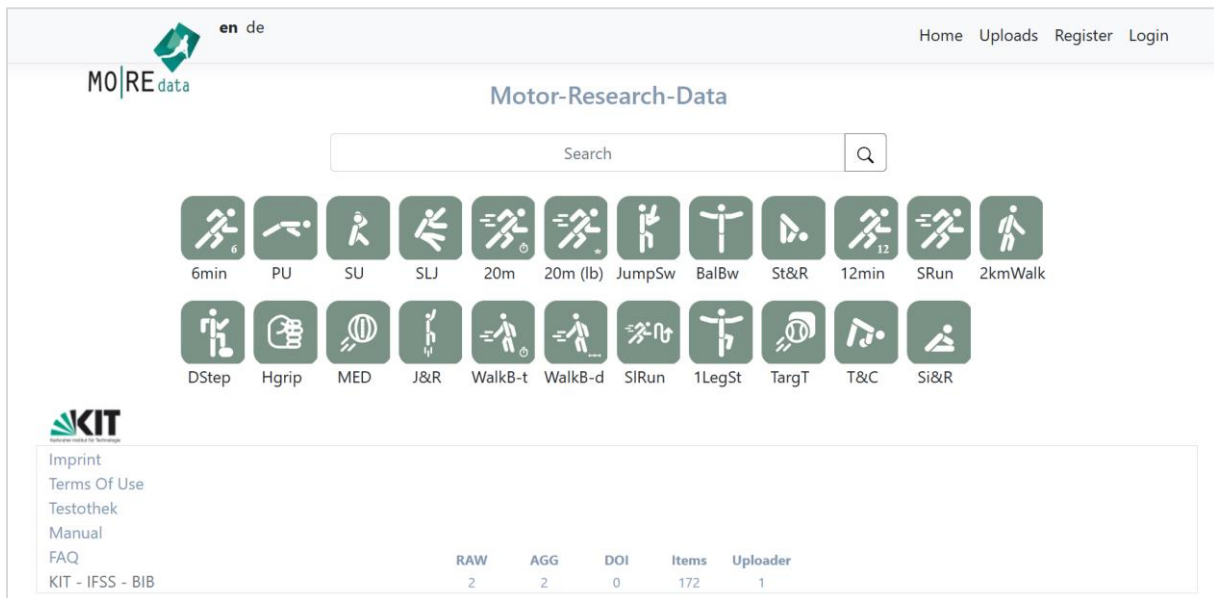


Figure 2: Front page MO|RE data repository.

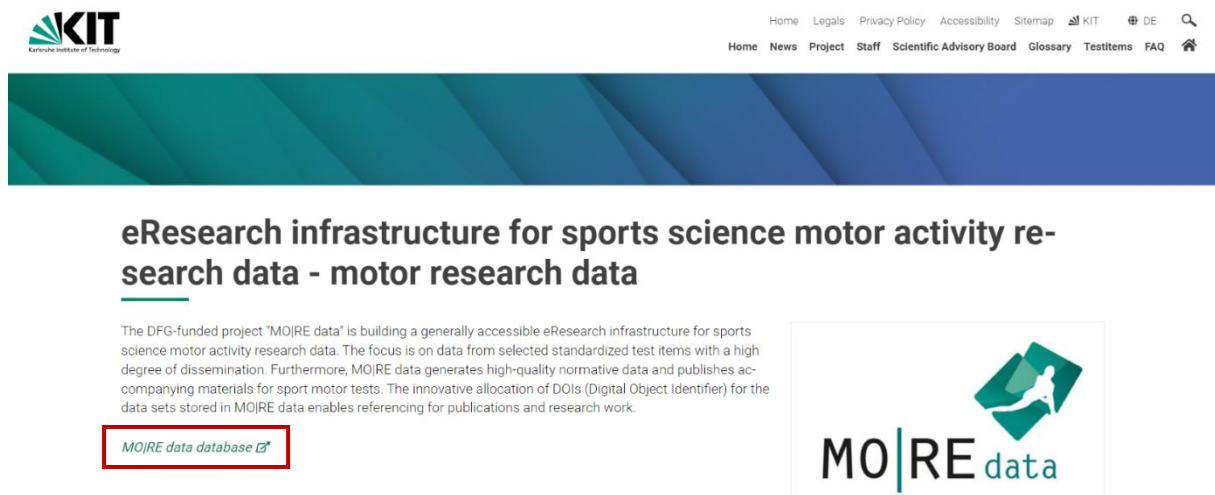


Figure 3: MO|RE data link on the IfSS-Homepage.

3.1. Technical requirements

MO|RE data runs as a web-based platform via all common browsers. An internet-capable device is required for use. We recommend using a tablet, laptop, or PC for best usability (smartphone displays may be too small).

If you experience problems with your browser that do not occur when you change browsers, please report them to our team. We are always trying to improve MO|RE data continuously and would be happy if you support us with your feedback.

We would like to explicitly point out the language settings: If integrated, turn off the automatic translation of your browser, otherwise sometimes tangled translation errors appear. In the top left window, you can easily switch the language between German and English. However, please avoid changing languages during a session on the platform, as this can irritate the system.

3.2. Registration with MO|RE data

For the full use of MO|RE data, you need an access authorization, which you can obtain by registering (see Figure 4). You have the option of registering in either German or English. On the front page of MO|RE data you can manually select the language in the upper left menu bar (cf. Figure 4). Then start the registration process by clicking the Register button in the upper right menu bar. A registration form will open (see Figure 5). In the registration form, the mandatory fields are marked with an asterisk (*). All personal data you provide will be managed in accordance with DSGVO. For more information, please refer to the privacy policy of MO|RE data. After filling in the fields, click on the Register button. You will shortly receive a notification to the e-mail address you provided with the MO|RE data Terms of Use and a 19-digit access code. To complete the registration, click on the link marked in the e-mail. By clicking on it, you agree to the MO|RE data terms of use. The registration is now completed.

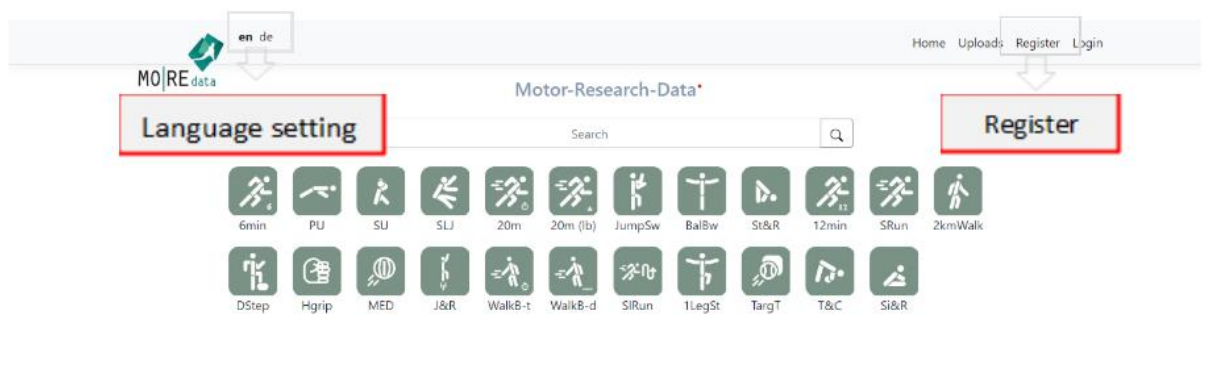


Figure 4: Registration and language setting on MO|RE data

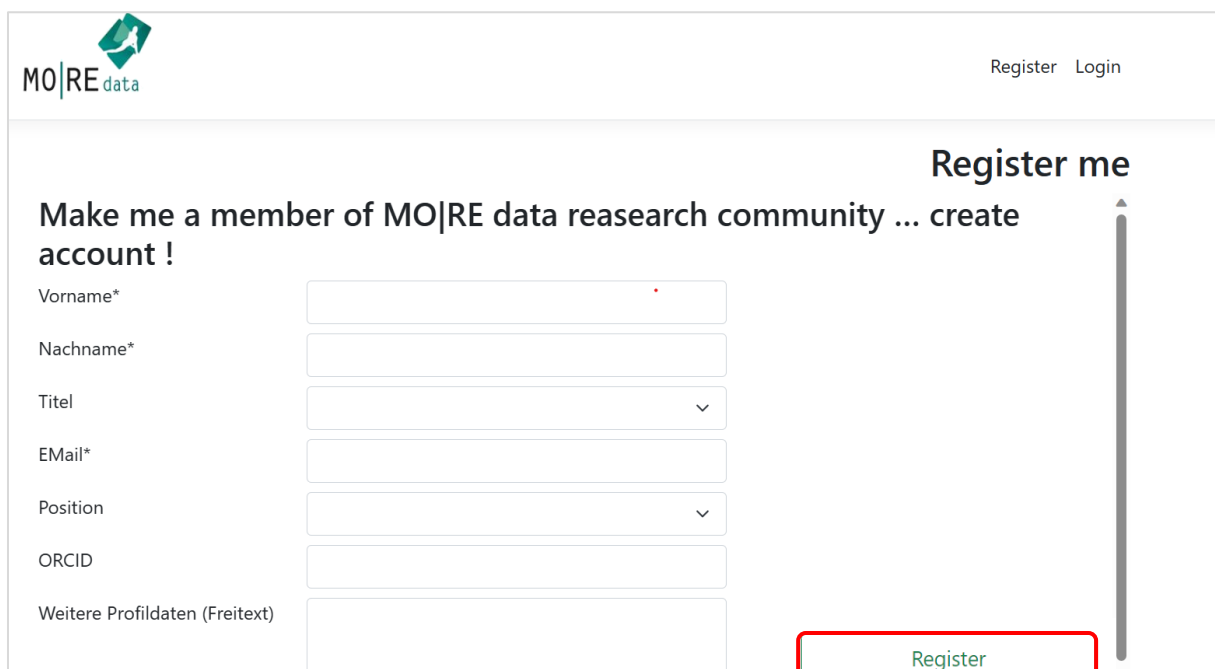
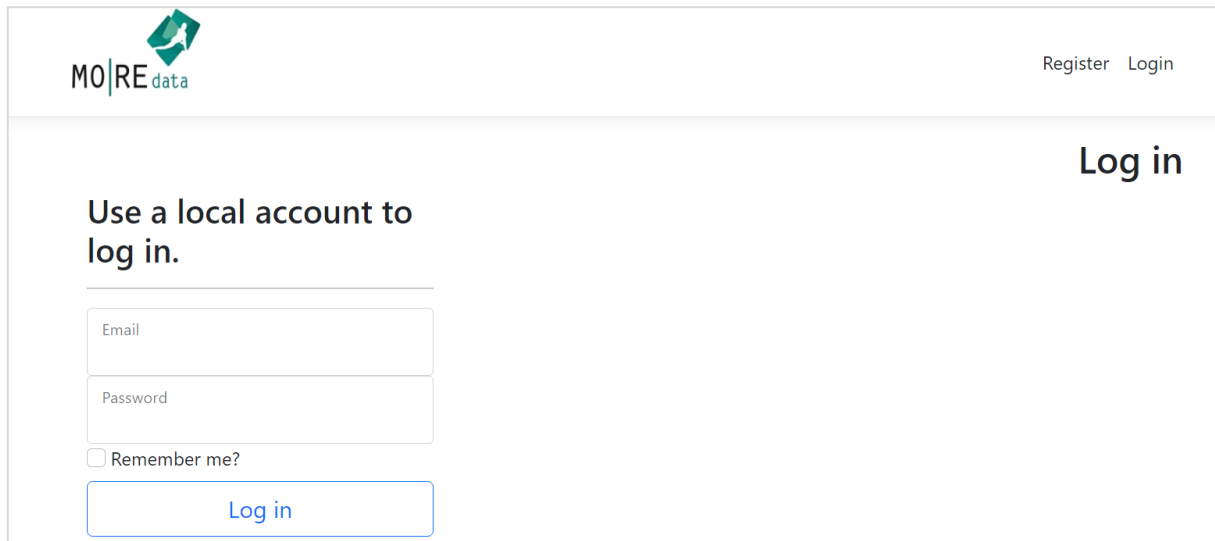
The image shows the registration form on the MO|RE data website. The header includes the MO|RE data logo and 'Register Login' links. The main heading is 'Register me' and the sub-heading is 'Make me a member of MO|RE data reasearch community ... create account !'. The form contains several input fields: 'Vorname*' (first name), 'Nachname*' (last name), 'Titel' (title), 'EMail*' (email), 'Position' (position), 'ORCID', and 'Weitere Profildaten (Freitext)' (additional profile data). A 'Register' button is located at the bottom right of the form, highlighted with a red box.

Figure 5: Registration form from MO|RE data

3.3. Logging on to MO|RE data

After you have registered once, use the Login button at the top right of the front page for each subsequent login to MO|RE data to get to the login screen (cf. Figure 6). Log in there using your e-mail address and the access code sent to you. When entering the access code, enter all the components, including the hyphens.

Once you have successfully logged in, you can edit your profile details at any time. To do this, click on the button with your e-mail address in the upper right menu bar. Your personal data will facilitate your identification or can be used for contacting the Editorial Board.



MO|RE data

Register Login

Log in

Use a local account to log in.

Email

Password

Remember me?

Log in

Figure 6: Login screen MO|RE data

3.4. Logging out of MO|RE data

You can log out of MO|RE data by clicking the Log out button in the upper right menu bar (see Figure 7). Use this function to protect your data from unauthorized access. After logging out, you will be returned to the MO|RE data front page.

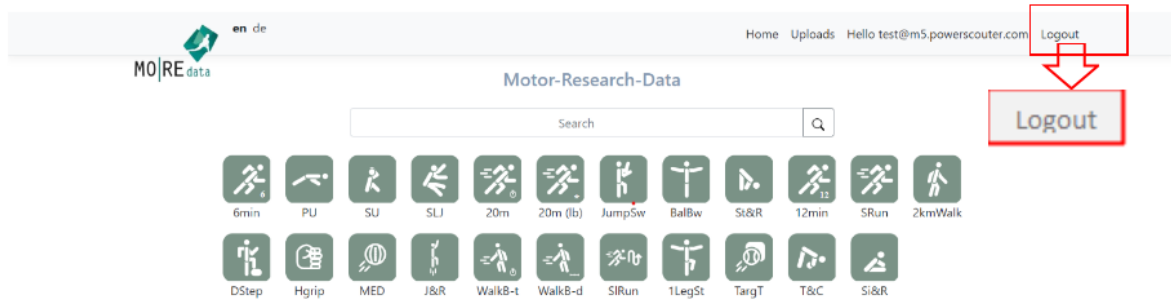
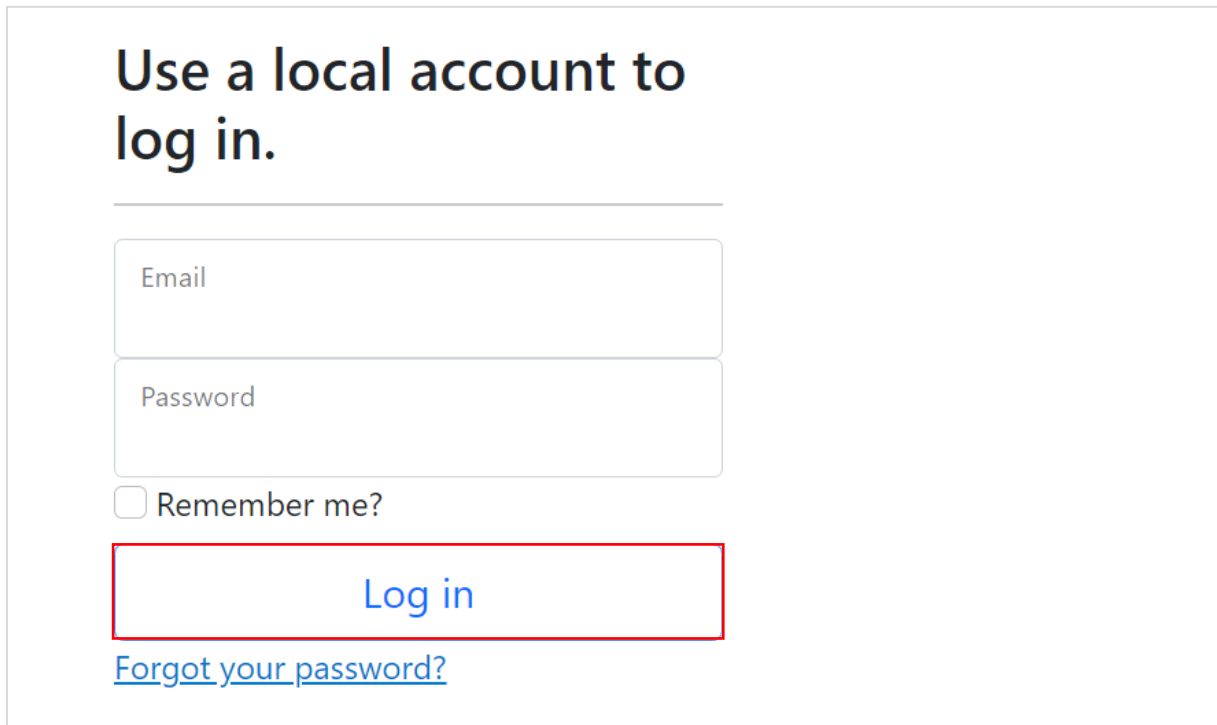


Figure 7: Logging out of MO|RE data

3.5. Change password/ Forgotten password

Falls If you have forgotten your password, you need to have it reset. To do this, click the [Forgot your password?](#) button (see Figure 8). Please enter the e-mail address you used to log in to this website for the first time. Then click on reset password. You will shortly receive a randomly generated password at the e-mail address you entered.

Note: If you do not remember the e-mail address you used to register, or if you do not yet have an e-mail account, you must create a new account (see Chapter 3.2).



Use a local account to log in.

Email

Password

Remember me?

Log in

[Forgot your password?](#)

Figure 8: Forgotten password

4. Data preparation for upload in MO|RE data

Die Data preparation is essential for a fast and uncomplicated upload and submission of a data set to MO|RE data. The better the dataset is prepared, the easier the subsequent steps will work: The mapping of variables and the automated quality check as well as the review by the editorial board.

For the submission of your dataset on MO|RE data, you should consider the following notes on data and metadata quality.

Below you will find a checklist with corresponding comments on the data submission process.

Table 3: Checklist for preparation

Preparation point	Comment	Check
Name test items clearly	<i>The more clearly the test item is labeled in its file, the easier it will be for you to assign it when mapping. Please use the test abbreviations from Table 1.</i>	<input type="checkbox"/>
Check units	<i>Use the same units for the test items as indicated in Table 1. Please adjust them if necessary and convert/allow Excel to convert.</i>	<input type="checkbox"/>
Check anonymity	<i>No names or other person-related assignments (e.g. date of birth) may be included in the data set! Please use person IDs!</i>	<input type="checkbox"/>
Observe file format	<i>MO RE data only accepts Excel documents in .xlsx- and .xls format. Please convert your file to this format. MO RE data will only consider the first spreadsheet of your Excel document.</i>	<input type="checkbox"/>
Completeness of the data set	<i>After uploading the dataset, you cannot delete/insert/format any rows or columns. Please upload the dataset already as it can be published. This also applies to all columns that are not mapped and are attached as additional data (e.g. questionnaire, activity behavior).</i>	<input type="checkbox"/>
Arrangement of columns	<i>Arrange the columns in their dataset as follows: Motor test items (mapping), constitutional values and header data about the person (mapping), other additional data (no mapping). See Figure 9 for an example data set.</i>	<input type="checkbox"/>
Formatting within the data set	<i>The data set must not contain blank rows, blank columns, different formatting within a column, pseudo-syntax (e.g. ""#Null!"), characters ("-" "?" "\"/""@") in the value fields. Please follow the recommended guidelines for document design.</i>	<input type="checkbox"/>
Only for aggregated data	<i>Exact names of test items from Table 1 must be used.</i>	<input type="checkbox"/>

	A	B	C	D	E	F	G	H	I
1	Gender	Age	Weight	Height	PU	6min	J&R	20m-Sprint	
2	f	10	24.1	132	16	880	15.6	5.9	
3	m	9	20.3	125	14	900	14.1	5.8	
4	f	8	19.5	120	7	760	10.5	6.3	
5	f	9	20.2	128	13	740	8.9	6.4	
6	m	8	19.4	127	6	680	11.5	7	
7	m	9	26.1	130	18	1010	17.2	5.5	
8	m	9	22.3	130	10	890	11.4	6.2	
9	f	10	24.7	135	5	590	5.9	7.8	
10	f	8	20.8	118	8	700	13.9	6.9	
11									
12									

Figure 9: Sample data set for raw data

Eine A standardized arrangement of data sets brings many advantages: The data set can be recorded faster and easier and is therefore comparable as well as expandable, so that data sets can be further used. Consequently, data preparation is of particular importance in the submission process in MO|RE data. Please put your entire document in as simple a form as possible. You can achieve this by keeping everything in black and white and making your dataset as readable as possible (cf. Figure 9).

Table 4: Recommendations for document layout

Overview	Headlines: bold, dates: normal
Format	Possible formats: Text, number or date fields
Headlines	Fix top row (View -> Fix window)

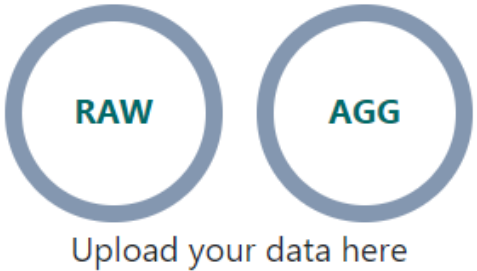
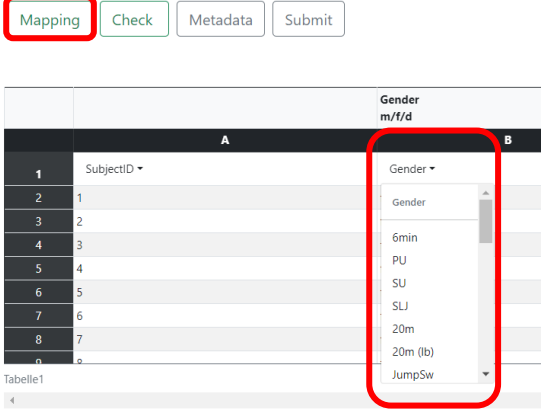
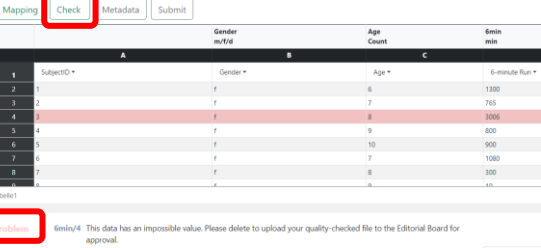
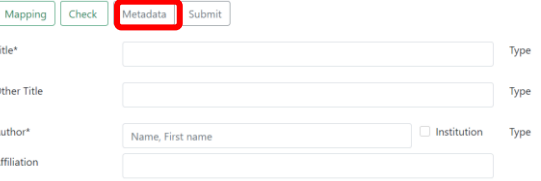
The functionality and quality of MO|RE data depends to a large extent on the willingness and cooperation of all data providers. The simplicity and comprehensibility of your data set for further use is essential. The quality of the datasets depends largely on your data preparation and ensures a long-term re-use of your collected sport motor research data. Thank you for your contribution!

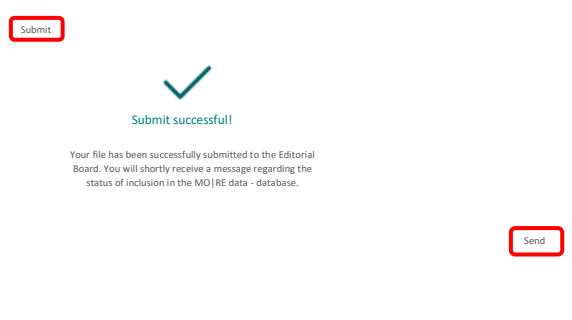
5. Submission in MO|RE data

The submission of a data set is the central function of MO|RE data. At the end, the dataset including metadata can be published, cited with the DOI, re-used, and retrieved. The association with a DOI enables the datasets to be located on both MO|RE data itself and on RADAR4KIT. In the following, the process from upload to submission to publication of a dataset is described in detail. On MO|RE data itself you will be guided through these steps step by step.

5.1. Data upload procedure up tp submission

Table 5: Data upload and submission process

<p>Upload dataset to MO RE data</p>	<p>Upload your dataset in raw or aggregated form to MO RE data. To do this, click the <i>RAW</i> or <i>AGG</i> button under Files accordingly.</p>	
<p>Mapping</p>	<p>In this step you execute the mapping. By clicking on the column header, you can select a suitable variable from the dropdown menu. Repeat this process for each column that should be mapped and thus searchable on MO RE data. After you have mapped all columns, press the <i>save</i> button.</p>	
<p>Check</p>	<p>To run the automated quality check, click the <i>Check</i> button. An automatic check of the mapped columns will run to find typing/input errors. If one of the 5 filters hits, the associated cells will be highlighted in red, and the <i>problem</i> will be listed below the table so that you can check the error message and revise it if necessary (see Chapter 5.1). After completing the quality check, click the <i>Save</i> button again.</p>	
<p>Metadata</p>	<p>The next step is to enter the metadata. To do this, click the <i>Metadata</i> button to specify information about your dataset. Mandatory metadata are marked with a (*). These must be filled in so that a DOI can be assigned. When you have entered your metadata completely, press the <i>Save</i> button.</p>	

Submission	<p>To verify your information, click the <i>Submit</i> button. If all the information is correct, you can complete the submission by clicking <i>Send</i>. Your mapped dataset incl. metadata will be forwarded to the Editorial Board for review.</p>																																																		
Dataset status overview	<p>You can view the current status of your record under <i>Files</i>. In the table displayed, your current status appears on the left under the <i>Status</i> column header:</p> <p><i>Uploaded</i> - Your dataset has been uploaded and not yet processed.</p> <p><i>Uploaded*</i> - At least one of the filters 2-5 is checked during the mapping process. Please check this before proceeding to the metadata.</p> <p><i>Submitted</i> - Your dataset has been submitted. The Editorial Board is now reviewing it.</p> <p><i>Accepted</i> - Your dataset has been reviewed and accepted by the Editorial Board.</p>	<table border="1" data-bbox="916 595 1490 891"> <thead> <tr> <th></th> <th>Status</th> <th>Date</th> <th>DOI</th> <th>n</th> <th>Type</th> <th>File</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>Accepted</td> <td>2023-02-06</td> <td></td> <td>10</td> <td>RAW-Data</td> <td>Suche...</td> </tr> <tr> <td>3</td> <td>Accepted</td> <td>2023-02-06</td> <td></td> <td>18</td> <td>RAW-Data</td> <td>Suche...</td> </tr> <tr> <td>4</td> <td>Accepted</td> <td>2023-02-06</td> <td></td> <td>14</td> <td>RAW-Data</td> <td>Suche...</td> </tr> <tr> <td>5</td> <td>Uploaded *</td> <td>2023-03-14</td> <td></td> <td>20</td> <td>RAW-Data</td> <td>testing</td> </tr> <tr> <td>6</td> <td>Submitted</td> <td>2023-02-22</td> <td></td> <td>20</td> <td>RAW-Data</td> <td>Worksh...</td> </tr> <tr> <td>7</td> <td>Uploaded</td> <td>2023-02-20</td> <td></td> <td>9</td> <td>AGG-Data</td> <td>Datei...</td> </tr> </tbody> </table>		Status	Date	DOI	n	Type	File	2	Accepted	2023-02-06		10	RAW-Data	Suche...	3	Accepted	2023-02-06		18	RAW-Data	Suche...	4	Accepted	2023-02-06		14	RAW-Data	Suche...	5	Uploaded *	2023-03-14		20	RAW-Data	testing	6	Submitted	2023-02-22		20	RAW-Data	Worksh...	7	Uploaded	2023-02-20		9	AGG-Data	Datei...
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7	Uploaded	2023-02-20		9	AGG-Data	Datei...																																													

5.2. User profile: submission

In your user profile, you can get an overview of all completed submissions under Files. The following information can be viewed:

- Status of the dataset (cf. 5.6)
- File name of the data set
- Date of upload to MO|RE data
- Assigned DOI® name for already published datasets
- Data set type: raw data (RAW) or aggregated data (AGG)

Here you can manage your saved files, e.g., open or delete, find DOI® names for citation. Please note that any modification of an already published dataset is no longer possible, as these files are on permanent storage (immutability of data).

Furthermore, the initial upload of a data set is checked for uniqueness of the delivery. If an already existing, identical data record is detected during the upload (can concern content or title), the upload is stopped, and you receive the following message: "an identical file already exists in MO|RE data. The delivered file is not accepted (no saving!)".

5.3. Data mapping

Data mapping means that a column is assigned to a specific variable. Data mapping is essential for merging with other data sets and retrieving their data. This mapping is performed for motor test data and other personal variables (see Table 1 & Table 2). An alternative method is to click on the Templates button above the table and select automatically. This action will perform the mapping automatically, provided that the correct abbreviations have been used, as indicated in Table 1.

For each column that you want to map and is mappable, you can select a variable from the drop-down menu. Each variable can only be selected once per data set. At the end of the mapping, we ask you to check the columns again so that all variables that should be searchable on MO|RE data have been selected.

Finally, you have the possibility to save the mapping scheme to use it for future datasets (e.g., for annual project datasets). To do this, enter a name for your template in the text field behind the Templates button after mapping. Then click on the Save button. The saved mapping scheme can be adapted later when you retrieve it for a new data set.

Please note that only test items that have been run according to the descriptions in Table 1 can be mapped. However, when uploading the dataset, it is necessary to map at least one test item, age and gender.

The saved mapping scheme can be modified for a new data set when it is called up.

Please note that only test items that have been performed according to the descriptions given in Table 1 can be mapped. The data can also be uploaded without mapping, but care should be taken to include an exact description in the metadata (Abstract field). In addition, we recommend assigning a unique variable name (e.g. push-up_30sec, single-leg_5cm etc.).

In addition, it should be noted that with a few mapped variables, the probability of filter 4 or 5 (cf. Chapter 6.1) being hit is very high. Since these can be overridden, nothing stands in the way of the upload, but it should be noted.

Please note for aggregated datasets that the exact names of the test items from Table 1 must be used.

The following columns can be mapped here: "Test item, unit, gender, age, mean and standard deviation".

Note: If necessary, change the language setting before mapping (Figure 4). If you have already started with the mapping in German, it is important that you keep this language setting in the further process. You can map the dataset in English as well as in German. Depending on the language you choose, you will be presented the abbreviations in English or German. The language is particularly important for the mapping of gender, since here only the values m, w, d are allowed in German and only the values m, f, d in English (cf. Table 2).

5.4. Upload of further data

In addition to the mapped data, your dataset may also contain other data from questionnaires or activity trackers, etc. These remain unchanged during the upload and can then be retrieved and published in the same way. However, a dataset must contain at least the variables age and gender as well as a test item.

5.5. Metadata input

Metadata must be entered manually in MO|RE data. After mapping and the quality check, you can store all supplementary information on your data set here. There are certain obligatory metadata without which no DOI® assignment and thus no upload can take place. These are marked with a (*).

All other information is voluntary, but strongly recommended in order to 1) make the data acquisition/processing traceable and 2) to ensure optimal reuse.

The complete list of metadata can be found in the following table:

Table 6: Overview metadata (M=Mandatory, R=recommended, O=optional)

Name	Mandatory information	Definition
Title	M	A title under which the data set is known. Please enter here the title under which the file should be listed in MO RE data and displayed in search queries.
Title type	M	Title type(s) (other than the main title).
Author	M	The principal researcher/author who participated in the creation of the dataset, or the author of the publication, in prioritized order. Repeat this property to indicate multiple author
Name of the author	M	The full name of the author
a box to tick	M	A personal name or institution name. The user selects whether to include his/her own name OR the name of the research institution by checking the box.
First name	M	First name
Surname	M	Family name
Affiliation	M	The author's organizational or institutional affiliation.
Co-author/ Contributor	R	-
Type of contributor	R	Type of contributor
Name of the co-author	R	Full name of the co-author.
a box to tick	R	Can be a personal name or name of institution. The user chooses by checking the box whether to include his/her own name OR name of research institution.
First name	R	First name
Surname	R	Family name
Affiliation	R	The organizational or institutional affiliation of the co-author.
Research sponsor	O	Research sponsor
Name/designation of research sponsor	O	Name/designation of research sponsor
Publisher	M	Publisher of the resource
Publication year	M	The year from which the dataset is or will be made publicly available. For datasets, publish means to make the data available to the research community on a specific date.
Keywords	R	Keywords describing the data set
Abstract	R	Any additional information that does not fit into any of the other categories.
Country	R	Country
Region/Place	R	Geographic region
ZIP CODE	R	Postal code
Language	O	Primary language of the record.
Temporal research design	R	The research design used

Survey method	R	Indication of the method used to collect the data
Period of origin	R	Period of origin of the resource
License	M	License for the data set (cf. chapter 8.4)
Related identifier	R	Identifiers that refer to a related resource, e.g. publication to which the published record refers.
Type of related identifier	R	The related identifier is a DOI, but it must not be a URL or link.
Notes Project/data set	R	Any additional information that does not fit into any of the other categories. Essential comments on the study or data collection can also be entered here, which can contribute to better data interpretation and, very importantly, also to better and more efficient data reuse.
Were data collected by trained and/or experienced testing personnel?	R	Quality question 1
Is an ethics notice available for the project/data collection?	R	Quality question 2
Is study-related documentation of data collection available (in publication or metadata)?	R	Quality question 3

After you have completed the metadata entry, it is possible to save this metadata in your profile to use it for future records. After metadata entry, enter a name for your template in the text field at the top left behind the *Templates* button. Then click the *Save* button. When you retrieve the saved metadata again, you can customize it for a new record.

5.6. Status check and completion of submission

You can end the submission by clicking the *Submit* button after entering the metadata. This forwards your mapped dataset including metadata to the Editorial Board for review and gives it the status *pending* for the time being. You can check the status of your dataset at any time via your user profile. You will also receive an email notification when the Editorial Board review is complete.

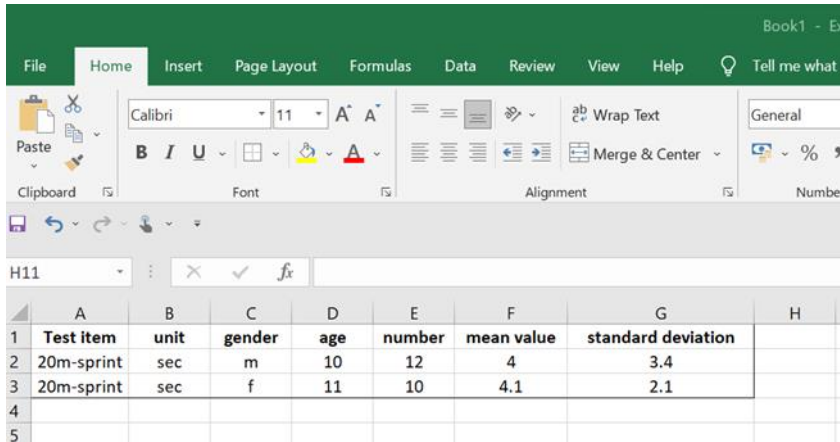
If the dataset has no objections from the Editorial Board (cf. Chap. 6.2), it will be marked as *accepted*. Your dataset with associated metadata is now published on the platform, can be found in searches, and is prepared for citation with a DOI®. You can still view all details in your profile.

If the dataset was *rejected*, you can re-upload the dataset in a corrected form using the Editorial Board's instructions.

5.7. Special features for aggregated data sets

Aggregated data sets are usually smaller data sets. It is important that the exact names of the test items from Table 1 are used.

For example, the file may look like this::



	A	B	C	D	E	F	G	H
1	Test item	unit	gender	age	number	mean value	standard deviation	
2	20m-sprint	sec	m	10	12	4	3.4	
3	20m-sprint	sec	f	11	10	4.1	2.1	
4								
5								

Figure 10: Example for aggregated data

Deviations concern the following areas:

- Mapping (cf. Ch. 5.3)
- Quality filter (cf. Ch. 6.1)
- Search (cf. Ch. 7)

5.8. Deleting a data set

Uploaded data sets can be deleted as long as they have not yet been submitted.

If you wish to delete a dataset that has already been published, this will only be done in justified exceptional cases and only after consultation with the MO|RE data team.

The MO|RE data team also reserves the right to delete data records for justified reasons. The reasons for deletion are, for example, legal violations, incorrect data in the data record or license changes to the data record that are not compatible with the licenses on MO|RE data.

In case of a deletion, only the data is deleted, but not the metadata. These contain a note that the data has been deleted.

6. Data quality

The data quality assessment process consists of two parts (cf. Figure 11: Q1 and Q2). The first part is a review of the data quality using defined filters (Ch. 6.1). The second part is a review by the editorial board team, a so-called review process (Ch. 6.2).

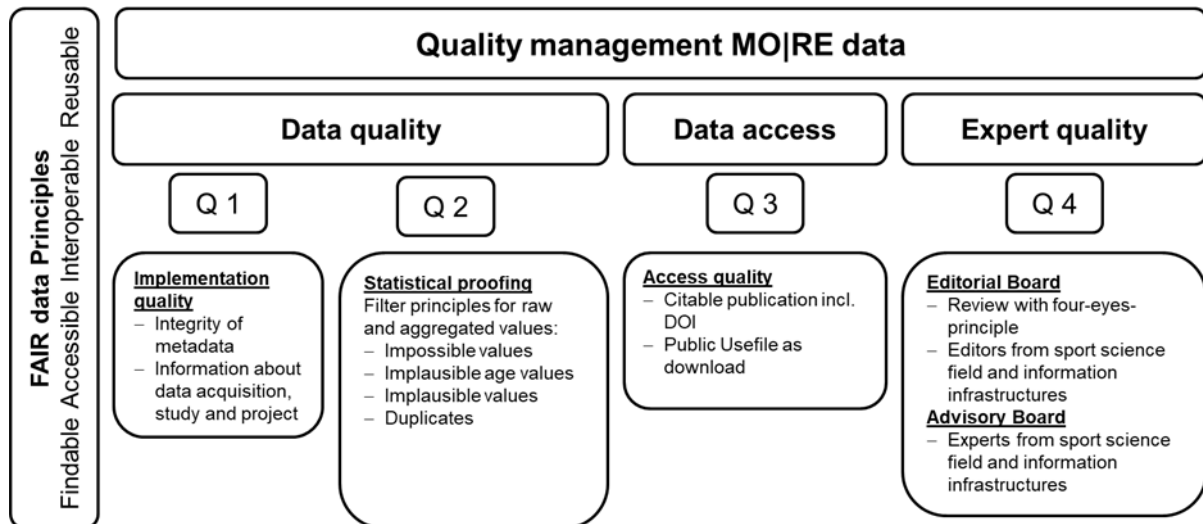


Figure 11: Quality management in MO|RE data

After successful peer review of the dataset, your research data will be automatically published on MO|RE data and assigned a persistent identifier, a DOI®.

6.1. Automatic filters for data quality review

Um To ensure the quality of the uploaded data records, all data records undergo an automated check. This serves you as a service, e.g., to find typing/entry errors. Only mapped columns are checked (see chapter 5.3), using five filters described in Table 7 . The filters were derived based on representative international data.

Please note: No cells/columns/rows are deleted. If a filter hits, associated cells are highlighted and listed so you can review them. With the exception of filter 1, all filters can be overridden, i.e. you can submit the dataset for review by the Editorial Board (EB) despite filters 2 to 5 having been hit. Then a red asterisk (*) appears in connection with the affected dataset. However, we ask for an explanation for the conspicuous data, if it is not already clear from the description in the metadata. When hitting filter 1, the corresponding values have to be deleted by you and the dataset has to be uploaded again. Depending on the size of the data set, the check may take a few minutes. We ask for a little patience here.

For the gender "Divers" the reference values of the gender "Male" have been used, because until today not enough diverse reference values are available. If you have data of the gender "diverse", we would like to encourage you to upload these data in order to be able to form reference values as soon as possible. Thank you.

If you have any questions about the filter criteria, please feel free to contact the MO|RE data team (more-data@ifss.kit.edu).

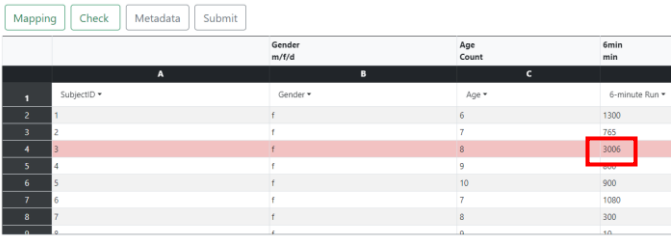
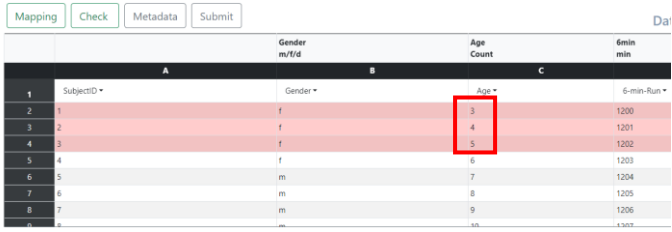

Table 7: Overview of the quality filters in MO|RE data for raw data

Sequence	Filtername	Description	Required ACTION data provider	Overdriveable?
1	Implausible values	Values that are completely impossible in relation to the variable	Deletion of the "Impossible value"	NO
2	Implausible values-age range	Values of motor tests that are not performed in certain age ranges	Review; approval and justification/reconciliation with EB or deletion of the value.	YES
3	Implausible values-limit	Values that are not plausible in relation to a certain age range	Review; approval and justification/reconciliation with EB or deletion of the value.	YES
4	Duplicates I	Two or more data rows have completely identical measured values (motor tests)	Review; approval and justification/reconciliation with EB or deletion of the duplicate.	YES
5	Duplicates II	Two or more data rows have identical values in constitutional values and personal data and identical values in >2 test items	Review; approval and justification/coordination with EB or deletion of the duplicate.	YES

Table 8: Overview of the quality filters in MO|RE data for aggregated data

Sequence	Filtername	Description	Required ACTION data provider	Overdriveable?
1	Implausible values	Values that are completely impossible in relation to the variable	Deletion of the "Impossible value"	NO
2	Implausible values-age range	Values of motor tests that are not performed in certain age ranges	Review; approval and justification/reconciliation with EB or deletion of the value.	YES
3	Implausible values-limit	Values that are not plausible in relation to a certain age range	Review; approval and justification/reconciliation with EB or deletion of the value.	YES
4	Duplicates I	Two or more data rows have completely identical values in the data rows	Review; approval and justification/reconciliation with EB or deletion of the duplicate.	YES

Table 9: Application examples for the five quality filters

Sequence	Filtername	Description	Example
Filter examples raw data			
1	Implausible values	Values that are completely impossible in relation to the variable	<p>The value of 3006 of the 4th subject is impossible.</p> 
2	Implausible values age range	Values of motor tests that are not performed in certain age ranges	<p>The test item 6-min-Run is not defined in the age group 3-5 years.</p> 
3	Implausible values-limit	Values that are not plausible in relation to a certain age range	<p>The value of the 6-min-Run of the second and 7th subject is not plausible.</p> 
4	Duplicates I	Two or more data lines have completely identical measured values (motor tests)	<p>Subjects 3 and 7 have identical values in the motor tests.</p>

Mapping Check Metadata Submit									
	Gender m/f/d	Age Count	6min min	PU Count	SU Count	SLJ cm	20m sec	J C	
A	B	C	D	E	F	G	H		
1	SubjectID ▾	Gender ▾	Age ▾	6-minute-Run ▾	Push-Ups ▾	Sit-Ups ▾	Standing Long Jump ▾	20-m-dash ▾	
2	1	m	14	1300	10	10	18.3	4.1	
3	2	m	15	1000	15	15	18.6	4.1	
4	3	m	14	1200	12	12	18.6	4.1	
5	4	m	14	600	13	13	18.3	4.1	
6	5	m	14	24	14	14	18.5	4.1	
7	6	m	15	1000	15	15	18.6	4.1	
8	7	m	15	900	16	16	18.3	4.1	
9	8	m	16	600	17	17	18.6	4.1	

5	Duplicates II	Two or more data rows have identical values in constitutional values and personal data and identical values in >2 test items	Subjects 3 and 4 have identical values in the constitutional values and personal data and in the motor tests.

Filter examples aggregated data

1	Impossible values	Values that are completely impossible with respect to the variable	The 20m dash mean value shows impossible values of 4 and 4.1 sec.
2	Implausible values boundary	Values that are not plausible in relation to a specific age range	The Danish Step Test mean value shows an implausible value of 70

6.2. Review process by the editorial board

The Editorial Board team consists of two editors representing Sport Science and Research Data Management (FDM).

The editors check the delivered dataset:

- the completeness and correctness of the mandatory metadata (necessary for a DOI® name registration at DataCite)
- the details of the content and additional metadata, which enable efficient subsequent use of the data by third parties
- self-disclosure of data collection (three questions in the metadata sheet)
- results of the data quality check by automatic filters (cf. chapter 6.1)
- comments of the submitter(s) to the Editorial Board team (if available)

Based on the abovementioned quality criteria, the Editorial Board team decides on whether the dataset can be published or not.

For the following reasons, the Editorial Board team may reject the dataset if:

- the metadata is incomplete (concerns mandatory metadata) or contradictory or incorrect, even if it is just a typo
- quality filters have been overridden in an unjustified and untraceable way
- the data set has multiple or gross inconsistencies with the quality requirements
- the upload requirements have not been met (e.g. anonymity)

In case of a rejection of a dataset, the data provider(s) will receive an E-mail from MO|RE data with the reasons for the rejection. In addition, the status *rejected* appears in the user profile for the respective data record.

The data provider can check the rejected data record according to the reason, adjust it to the quality specifications of MO|RE data and upload the adjusted data record again. In this case, the dataset must be re-mapped and go through the review process again.

In principle, a rejected dataset can be uploaded several times after correction until the dataset meets the quality specifications and is accepted by the Editorial Board team.

In case of a successful data publication, the data provider will also be notified by e-mail and will see the status published in the user profile for the respective data set. The assigned DOI® for the published dataset can also be found in the user profile.

7. Search on MO|RE data

The search function on MO|RE data is freely accessible to any person. However, data sets can only be downloaded with registration. With the search you can search by the respective DOI® or with keywords and test exercises within the database.

If you want to search for a specific test exercise, you have the possibility to select several test icons by clicking on them (see Figure 12). Furthermore, you can also combine your search query by entering corresponding keywords in the free search field next to the test icons. If you enter several search terms, connect them with a comma. Search as specifically as possible. After you have executed your search query, you can check it using the search string highlighted in gray. The search string assigns your search terms to a corresponding category so that you can check whether your search was executed as desired.

Below are some search examples:

Table 10: Example for searching on MO|RE data

Example	Searchtext	Icons
1.	12y, 2010	
2.	2020, 2021, 2022, 2023, raw	
3.	m, Germany, USA	

Matching search hits are displayed by MO|RE data and provide you with an associated overview that includes the following items: Survey period in years (e.g.: 2014-2017), Author, Title, RAW or AGG, N, m/f/d, age range.

As a non-registered user, you will get an overview list and can click on the result line to display the first line of the respective record. Additionally, you can view and download the metadata sheet, but no download of the dataset is possible.

As a registered user, you will receive an overview list and can view and download the complete data record by clicking on the result line. In addition, you can view and download the metadata sheet.

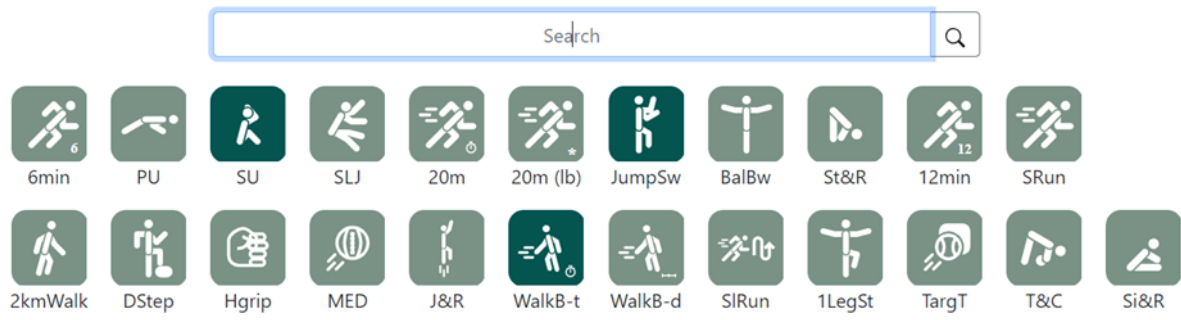


Figure 12: Search function on MO|RE data

8. Additional Information on the MO|RE data project

In the following chapter, you will find detailed information about the project team, which consists of experts from the Institute of Sports and Sports Science and the KIT Library, as well as the cooperation partner mb-mediasports, which takes care of the IT infrastructure. Furthermore, you can find out about DOI and licensing and read information about data protection.

8.1. Organization

The organizational structure of MO|RE data consists of a Scientific Advisory Board and an Editorial Board. The Scientific Advisory Board contributes to the long-term development of MO|RE data and comments on its current status. The Editorial Board Team takes an operational role in the organizational structure and is responsible for reviewing datasets uploaded to MO|RE data.

The Editorial Board Team is composed of experts in the field of sport and sport science as well as in the field of research data.

The management of the metadata, assignment of DOI® names and publication of the research data after the successful review process is done automatically by the MO|RE data software system.

8.2. MO|RE data cooperation partners

For the development and securing of the technical infrastructure of MO|RE data, the Institute of Sport and Sports Science cooperates with the KIT Library, the external IT company mb-mediasports and the Steinbuch Centre for Computing at KIT.

The cooperation partner Centre for Computing secures in the long term all data published on MO|RE data on its permanent storage and provides the Institute of Sport and Sport Science with a server for the technical development of the platform.

DOI® naming is possible thanks to a connection to the RADAR4KIT infrastructure operated internally at the KIT Library. The KIT Library as a project partner supports the MO|RE data project mainly in the field of research data management and Open Science.

Mb-mediasports is a very experienced IT service provider with whom the IfSS has already been able to realize numerous projects (including the data entry platforms for the European Fitness Badge, German Motor Skills Test, and many more).

8.3. Digital Object Identifier (DOI®)

In order to ensure permanent access to digital, but also to physical and abstract objects, persistent identifiers are assigned to the data or digital objects published on the network, one of which is the Digital Object Identifier (DOI®).

The DOI® is used to store metadata about the referenced object. The metadata must comply with the schema of the respective registration agency (e.g. DataCite). Therefore, the metadata schema on MO|RE data is based on the recommendations of DataCite.

With DOI® names, published data can be cited more easily and securely, since a DOI® name remains unchanged if the location is changed.

For each dataset published on MO|RE data, the platform assigns a DOI® name. MO|RE data obtains DOI® names through the internal infrastructure, RADAR4KIT, which registers DOI® names with DataCite. This ensures that all datasets are also published in a generic, institutional repository, RADAR4KIT. RADAR4KIT operates based on the service provided by FIZ Karlsruhe. The data storage takes place exclusively on the IT infrastructure of KIT at the Steinbruch Centre for Computing (SCC). DataCite serves as an official DOI® registration agency for research data.

8.4. Licensing of MO|RE data

MO|RE data offers its users a choice of free Creative Commons (CC) licenses for the data packages (dataset & metadata). On MO|RE data, data providers can choose from two licenses: CC-BY 4.0 International (Attribution) and CC-BY-SA 4.0 International (Attribution-ShareAlike). The license selection is based on the concept of MO|RE data as an Open Science and Open Content platform. In addition, these two mutually compatible licenses allow execution of the data aggregation function. However, if multiple datasets are merged, the stricter license (CC-BY-SA) must be applied. The rights of the data owner to the data are not affected by the granting of a CC license. The data owner is also the licensor and must explicitly agree to the use of any license by selecting MO|RE data (metadata field). This means that only the data owner may determine under which CC license the data will be published on MO|RE data. By doing so, the data owner indemnifies the MO|RE data platform from claims of third parties that could be asserted against MO|RE data due to infringements of rights.

The free licenses used here grant all data providers the same rights ("everyone licenses"). It is not possible to grant exclusive rights of use to selected data providers under the free licenses. Free licenses are irrevocable as soon as someone has taken possession of a work licensed in this way. It is not possible for the author to withdraw or limit a license once it has been granted.

Only registered users have access to the data sets and the associated metadata at MO|RE data. Upon registration, each user of MO|RE data must agree to the terms of use. In case of suspicion of misuse of the license and/or the terms of use, suspected user accounts may be blocked by the platform operator.

8.5. Data protection

The MO|RE data team takes the privacy of users and the data sets available in MO|RE data very seriously. In the two documents "Privacy Policy" and "Terms of Use" at the bottom left of the MO|RE data home page, all users will find the necessary information to assess data protection.

9. Glossary

Term	Definition
Aggregated data	Also "macro data" - summary of "micro data" (raw data).
Anonymization	According to BDSG (Federal Data Protection Act) § 3, para. 6, anonymization means any measures that change personal data in such a way that "the individual details about personal or factual circumstances can no longer be assigned to a specific or identifiable natural person or can only be assigned to such a person with a disproportionate amount of time, expense and effort".
applicant	Applicant for certification with CoreTrustSeal.
Archive	Related to the research data management context, an archive is a collection of data. These should be retained in the archive indefinitely. An archiving period for research data of usually ten years has emerged. A special form of archiving research data is the so-called repository.
Authenticity	The authenticity of an object or data is understood to mean the authenticity and credibility of the object or data, which can be verified based on a unique identity and characteristic properties.
Best practice	A method of running a work process that has already been tried and tested. It is "a technique or methodology that has been proven through experience and research to be reliable in leading to a desired result."
Bitstream-Preservation	Bitstream preservation is the ability to preserve the bitstream beyond technology changes. Bitstream preservation only guarantees the exact preservation of the underlying bitstream and makes no claims about whether the data that the bitstream represents can still be meaningfully represented or analyzed in the future.
Brief Description of Repository	Brief description of a repository; the description should ideally include a diagram and a description of the overarching organizational structure.
CoreTrustSeal Certificate	The repository has passed an audit/review by an Expert panel as trustworthy and receives a certificate. Further information at: https://www.coretrustseal.org/
Creative Commons Licenses	A license is permission to use copyrighted material. The use of liberal licensing models, in particular the globally recognized Creative Commons (CC) licenses, is one way to specify conditions for the subsequent use of published research data in a comprehensible way. More information at: https://creativecommons.org/about/cclicenses/
DataCite	DataCite promotes data sharing, access to research data, and enhanced protection of research investments. As a global consortium, DataCite brings together individual regional (national) members who can provide direct service to the scientist. The cooperation promotes worldwide research scientists and creates global access to scientific research data.
File format	The file format (sometimes called file type, file type or data format) is generated when a file is stored and contains information about the structure of the data present in the file, its purpose and affiliation.
Data provider (here identical to data owner)	A registered user of the platform who wishes to upload his/her research data to the "MO RE data" repository and obtain a DOI name for the research data.
Data curation	Data curation describes what management activities are required to maintain research data (over the long term) so that it is available for reuse and preservation. Data curation is a necessary element for both searching, locating, and retrieving the data, as well as maintaining its quality, adding value, and reusing it over time.
Data user	A (registered) user of the platform who searches for, downloads, or cites data.
Data record	Group of data in a file that belong together in certain respects.
Privacy policy	Describes how data (especially personal data) is processed by an organization, i.e. how this data is collected, used and whether it is passed on to third parties.
Datensicherung (Backup)	Backing up data is most referred to as a backup or a backup copy and is used to restore the original data in the event of data loss.
Daten-Upload	The process of uploading data and associated metadata to a data repository.
Datenzugriff (data access)	The ability to access and read specific data and information on storage devices such as drives or databases.
Designated Community	A target audience of potential users who are able to understand and interpret specific information (from the data collection).
DFG	The German Research Foundation (DFG) is a registered association that functions as a self-governing body for the promotion of science and research in the Federal Republic of Germany.
Digital Object	An object consisting of a bit sequence.

DMT 6-18	German Motor Skills Test 6-18; More information at: https://www.ifss.kit.edu/dmt/english/index.php
DOI	Digital Object Identifier, a persistent identifier (PI). A DOI remains the same throughout the lifetime of a designated object.
Editorial Board	A group of experts who check the quality and correctness of the data supplied.
(empirical) study	A scientific method which, through the systematic collection, evaluation and interpretation of data, gains knowledge and allows statements to be made about reality.
eResearch	Use of information technology to support existing and new forms of research.
Evidence	Evidence (documentation)
FAIR data	FAIR means Findable, Accessible, Interoperable, and Reusable. The main goal of the FAIR Data principles is an optimal preparation of research data, which should be findable, accessible, interoperable, and reusable.
Research Data	Research data are (digital) data generated during scientific activity (e.g. through measurements, surveys, tests, source work). They form a basis for scientific work and document its results.
Research Data Management	Research data management is the process of transforming, selecting, and storing research data with the aim of keeping it accessible, reusable and verifiable in the long term and independently of the data creator.
Ingest	The process of entering data and associated metadata into a data repository.
Insource/Outsource Partners	Cooperation partners internal/external
Integrity	A system guarantees data integrity if it is not possible for subjects (e.g. users) to manipulate, e.g. change, the data to be protected without authorization and without being noticed.
KOMET	Competence center of motor tests. Coordination and bundling of all activities related to motor tests - see also "Bös et al. (2021). KOMET - Kompetenzzentrum motorische Tests. Hintergrund & Testbeschreibungen".
Continuity of access to data (continuity of access)	Sustainability of data storage; long-term archiving/long-term availability of digital resources.
Long-term archiving	More than just the permanent storage of digital information on a data carrier. Rather, it includes the preservation of the permanent availability and thus a subsequent use and interpretability of the digital resources.
Mapping (data mapping)	Data mapping is the process of transferring data (elements) from one data model to another. This is the first step in integrating foreign information into one's own information system.
Metadata	Intrinsically independent data that contain structured information about other data or resources and their characteristics. They are stored independently of or together with the data they describe in more detail.
Metadata standard	A requirement to provide a common understanding of the meaning of the data to ensure the correct and proper use and interpretation of the data by its owners and users.
Mission/Scope	Each repository has an explicit mission to provide access to stored data for its intended audience (designated community) and to archive the data for the long term.
MO RE data	Motor research data - eResearch infrastructure for sports science motor research data.
Reuse of data/Data Reuse	The reuse of collected data for a specific purpose, to investigate a new problem or to verify the conclusions of the data producer.
NFDI	The National Research Data Infrastructure is a digital, distributed infrastructure currently under construction that will provide the scientific community in Germany with services and advice on all aspects of research data management. More information at: https://www.nfdi.de/?lang=en
Standardization/Norm data	Normalization is the development of a conversion scale from raw scores to norm scores for the purpose of establishing comparability of an individual test result with a representative comparison group.
Manual	Ordered compilation of knowledge, explanations, instructions for use.
Terms of use	Legal agreements between a service provider and a person who wants to use this service. The person must agree to comply with the terms of use in order to use the offered service.
Open access	A free access to scientific literature and other materials on the internet.
Open Archival Information System (OAIS)	An archive consisting of an organization of people and systems that has taken on the responsibility of preserving information and making it available to a target group (designated community).
Open data	Open data is data that anyone can use, redistribute, and reuse for any purpose.
Open science	Open science is transparent and accessible knowledge that is shared and (further) developed through collaborative networks.
Persistent identifier	In research data management, a persistent identifier is a permanent (persistent) digital identifier consisting of digits and/or alphanumeric characters that is assigned to a data set (or other digital

	object) and refers directly to it. A persistent identifier refers to the object itself and not to its location on the Internet.
Personal data	The German Federal Data Protection Act (BDSG) defines personal data as "individual information about personal or factual circumstances of a specific or identifiable natural person (data subject)". Data can be considered personal if it can be clearly assigned to a specific natural person. Typical examples are the name, occupation, height or nationality of the person.
Repository type	Determines the function of a repository. Repositories are divided into three variants based on their subject focus and operator: subject-specific, generic, institutional.
Repository	Storage place to archive digital research data for a longer period of time and in many cases also to publish it.
Raw Data	Also "primary data" or "original data" - data that has not yet been processed or evaluated.
Trustworthy Data Repositories	A repository is certified or assessed as trustworthy based on the 16 specified requirements (Requirements).
Type of data accepted by the repository	Scope and nature of data collection.
Originator	According to the Copyright Act (§ 7 UrhG), an author is the creator of the work.
URN (Uniform Resource Name)	URN is the name of an identification and addressing system and is used similarly to a DOI for persistent identification of digital objects (net publications, datasets, etc.).
Scientific Advisory Board	A group of external experts who support the project team in the scientific evaluation of the results and act in an advisory capacity.
Citation	Currently, there is no uniform standard for the citation of research data. However, research data should be given a persistent identifier, such as a DOI, when it is published, and this identifier should be used for citation.