Materials Design Analysis Reporting (MDAR) Checklist for Authors

The MDAR framework establishes a minimum set of requirements in transparent reporting applicable to studies in the life sciences (see Statement of Task: doi:10.31222/osf.io/9sm4x.). The MDAR checklist is a tool for authors, editors and others seeking to adopt the MDAR framework for transparent reporting in manuscripts and other outputs. Please refer to the MDAR Elaboration Document for additional context for the MDAR framework.

Materials

Antibodies	Yes (indicate where provided: section/paragraph)	n/a
For commercial reagents, provide supplier name, catalogue number and RRID, if available		Not applicable

Cell materials	Yes (indicate where provided: section/paragraph)	n/a
Cell lines: Provide species information, strain. Provide accession number in repository **OR** supplier name, catalog number, clone number, **OR** RRID		Not applicable
Primary cultures: Provide species, strain, sex of origin, genetic modification status.		Not applicable

Experimental animals	Yes (indicate where provided: section/paragraph)	n/a
Laboratory animals: Provide species, strain, sex, age, genetic modification status. Provide accession number in repository **OR** supplier name, catalog number, clone number, **OR** RRID		Not applicable
Animal observed in or captured from the field: Provide species, sex and age where possible		Not applicable
Model organisms: Provide Accession number in repository (where relevant) **OR** RRID		Not applicable

Plants and microbes	Yes (indicate where provided: section/paragraph)	n/a
Plants: provide species and strain, unique accession number if available, and source (including location for collected wild specimens)		Not applicable
Microbes: provide species and strain, unique accession number if available, and source		Not applicable

Human research participants	Yes (indicate where provided: section/paragraph)	n/a
Identify authority granting ethics approval (IRB or equivalent committee(s), provide reference number for approval.	In *Ethical Statement* Section: The study was approved by the Ethics Committee of the West China Hospital of Sichuan University (No. 2020(258)).	
Provide statement confirming informed consent obtained from study participants.	In *Ethical Statement* Section: Written informed consent was obtained from each patient for publication of this study and any accompanying images.	
Report on age and sex for all study participants.	Reported in Table 2	

Design

Study protocol	Yes (indicate where provided: section/paragraph)	n/a
For clinical trials, provide the trial registration number **OR** cite DOI in		Not applicable

Laboratory protocol	Yes (indicate where provided: section/paragraph)	n/a
Provide DOI or other citation details if detailed step-by-step protocols are		Not applicable

Experimental study design (statistics	Yes (indicate where provided: section/paragraph)	n/a
State whether and how the following have been done**, or** if they were not		
Sample size determination	Reported in Methods Statistical analysis section/ Paragraph 1: For multiple regression……We would ensure that the number of subjects is not less than the corresponding sample size when building models.	
Randomisation		Not applicable
Blinding		Not applicable
Inclusion/exclusion criteria	Reported in Methods Study subjects section/ Paragraph 2: The suspected sarcopenia volunteers were primarily included if following criteria 1 and any one of 2-4 were met: (1) Age over 60 years old……	

Sample definition and in-laboratory	Yes (indicate where provided: section/paragraph)	n/a
State number of times the experiment was replicated in laboratory		Not applicable
Define whether data describe technical or biological replicates		Not applicable

Ethics	Yes (indicate where provided: section/paragraph)	n/a
Studies involving human participants: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number	In *Ethical Statement* Section: The study was approved by the Ethics Committee of the West China Hospital of Sichuan University (No. 2020(258)).	
Studies involving experimental animals: State details of authority granting ethics approval (IRB or equivalent committee(s), provide reference number		Not applicable
Studies involving specimen and field samples: State if relevant permits obtained, provide details of authority approving study; if none were required,		Not applicable

Dual Use Research of Concern (DURC)	Yes (indicate where provided: section/paragraph)	n/a
If study is subject to dual use research of concern, state the authority granting approval and reference number for the		Not applicable

Analysis

Attrition	Yes (indicate where provided:	n/a
State if sample or data point from the analysis is excluded, and whether the criteria for exclusion were determined and specified in advance.	In results section paragraph 1: No data point from the analysis was excluded	

Statistics	Yes (indicate where provided:	n/a
Describe statistical tests used and justify choice of tests.	In Statistical analysis section: Statistical analyses were performed using SPSS 24.0 software (IBM, Armonk, NY, USA). The Shapiro-Wilk test was used to verify the normality of continuous variables…	

Data Availability	Yes (indicate where provided:	n/a
State whether newly created datasets are available, including protocols for access or restriction on access.	In Data sharing statement: The data used to support the findings of this study are available from the corresponding author upon request.	
If data are publicly available, provide accession number in repository or DOI or URL.		Not applicable
If publicly available data are reused, provide accession number in repository or DOI or URL, where possible.		Not applicable

Code Availability	Yes (indicate where provided:	n/a
For all newly generated code and software essential for replicating the main findings of the study:		Not applicable
State whether the code or software is available.		Not applicable
If code is publicly available, provide accession number in repository, or DOI or URL.		Not applicable

Reporting

Adherence to community standards	Yes (indicate where provided: section/paragraph)	n/a
MDAR framework recommends adoption of discipline-specific guidelines, established and endorsed through community initiatives. Journals have their own policy about requiring specific guidelines and recommendations to complement MDAR.		
State if relevant guidelines (eg., ICMJE, MIBBI, ARRIVE) have been followed, and whether a checklist (eg., CONSORT, PRISMA, ARRIVE) is provided with the manuscript.	ICMJE guidelines were followed, as the journal follows ICMJE recommendations for publication.	

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