

EDITORIAL

Helping to know about the intervention: The Template for Intervention Description and Replication (TIDieR) checklist is now available in Brazilian Portuguese

The use and replication of high-quality evaluative research in practice are dependent upon good reporting of the interventions. However, the reporting of interventions is poor in many fields, contributed by the authors' low awareness of what constitutes adequate reporting.^{1,2} The TIDieR (Template for Intervention Description and Replication) reporting guideline is a 12-item checklist that was created to improve the quality of reporting and the replicability of interventions.² TIDieR is an extension of the Consolidated Standards of Reporting Trials (CONSORT) 2010 and the Standard Protocol Items: Recommendations for Interventional Trials (SPIRIT) 2013 reporting guidelines, which were created to improve the reporting of clinical trials and clinical trial protocols respectively.^{3,4} The 12 items of TIDieR are briefly described in [Table 1](#).

The problem of incomplete reporting of interventions revolves around research waste. If a study inadequately describes its intervention, and the intervention, if effective, cannot be implemented, then it contributes to a waste of the research funding. Although clinical trials must aim for high methodological quality, complete reporting is also needed to enable replication and implementation. Nowadays more attention is being directed to developing interventions that can be replicated and scaled up, and the complete reporting of such interventions is a fundamental part of this process.

Previous studies have reported that incomplete description of interventions is a problem in randomised controlled trials in many fields of healthcare.^{2,5–7} For example, adequate reporting was available for only 20% of evidence-based practice educational interventions,⁸ and 21% of group management of type 2 diabetes interventions.⁹ Analysis of samples of reports of oncology interventions and acupuncture interventions found inadequate reporting in all the studies assessed.^{10,11} In an evaluation of the reporting of interventions in physical therapy trials, the description of

the active interventions was complete for more than 70% of the studies, compared with 30% of the control group interventions.¹² Especially in physical therapy, recent systematic reviews have identified a low quality of reporting of interventions, and strongly encourage the use of TIDieR in conducting and reporting future studies.^{13–16}

Even though TIDieR was initially created to guide the reporting of interventions in trials and other evaluative study designs, several extensions and adaptations of the original reporting guideline have been developed.^{17–20} Some examples include: TIDieR-PHP, adapted for population health and policy interventions¹⁷ - which is for interventions that are conducted at a population level and aim to change behaviours or social and economic determinants of health (e.g., legislation for smoke-free public places, reduced urban speed limits); TIDieR for placebo and sham control interventions (TIDieR-placebo)¹⁸ - complete reporting aids the understanding of the potential benefits and harms of the active interventions when compared to placebo; and TIDieR for telehealth interventions (TIDieR-telehealth)¹⁹ - to meet the growing demand of implementation of e-health interventions. TIDieR can also be used to report intervention descriptions in systematic reviews of interventions²¹ and its use is recommended as part of the systematic review reporting guideline - PRISMA 2020.²²

The work of improving the reporting of interventions requires efforts not only from study authors but also from publishers, journal editors, reviewers, institutional regulatory boards, universities, research facilities and other educational institutions, funding agencies, and stakeholders.²³ The use of the TIDieR should be mandatory in the submission process for journals and in earlier pre-publication locations, such as trial registries and protocols. The word limit of published articles should not be a barrier and journal editors and publishers should require complete reporting and encourage the use of online supplementary materials when

Table 1 Description of the items included in the TIDieR.²

Item	Description
1. Brief name: Provide the name or a phrase that describes the intervention.	Providing a clear name or a brief description of the intervention makes it easier to identify the type of intervention and find other reports of the same intervention.
2. Why: Describe any rationale, theory, or goal of the elements essential to the intervention.	Describing the rationale, theory, or goals that underpin an intervention, or components of a complex intervention, contributes to the identification of elements that are essential to the intervention, rather than optional or incidental.
3. What (materials): Describe any physical or informational materials used in the intervention, including those provided to participants or used in intervention delivery or training of intervention providers. Provide information on where the materials can be accessed (for example, online appendix, URL).	This is typically the least well described item of interventions. It is necessary to describe what physical and informational materials were used in the intervention, including those used in training the providers of the intervention. In the case of extensive descriptions, it is advised to provide this information elsewhere (e.g. supplementary appendix, published protocol, or website) and report this location in the main paper.
4. What (procedures): Describe each of the procedures, activities, and/or processes used in the intervention, including any enabling or support activities.	Describe what processes, activities, or procedures the intervention provider/s carried out to provide the intervention.
5. Who provided: For each category of intervention provider (for example, psychologist, nursing assistant), describe their expertise, background, and any specific training given.	Describe the number of people involved in providing the intervention, along with the expertise and profession of those involved. It is also important to describe whether there was specific training to conduct the intervention provided, and it may be relevant to describe if the providers were specially recruited to provide the intervention, and whether any incentive was provided.
6. How: Describe the modes of delivery (such as face-to-face or by some other mechanism, such as the internet or telephone) of the intervention and whether it was provided individually or in a group.	Describe whether the intervention was delivered individually or in a group (if yes, what was the number of participants in each group); whether the intervention was face-to-face or remotely (if yes, what was the delivery method, such as synchronous or asynchronous, recorded classes) or mixed.
7. Where: Describe the type(s) of location(s) where the intervention occurred, including any necessary infrastructure or relevant features.	Describe the location in which the intervention was conducted. This description can impact the feasibility and adherence of the intervention and is important for future replication of the intervention.
8. When and how much: Describe the number of times the intervention was delivered and over what period of time including the number of sessions, their schedule, and their duration, intensity, or dose.	The type of information needed for this item will differ depending on the type of intervention (e.g., pharmacological, or non-pharmacological).
9. Tailoring: If the intervention was planned to be personalised, titrated, or adapted, then describe what, why, when, and how.	Some interventions might be purposefully tailored for participants (e.g., modifications in dose or intensity). If so, how it was tailored and the reasons for this should be well described, along with the variables and tools used to assess the participants, when the intervention was tailored, and any decision points or rules for tailoring.
10. Modifications: If the intervention was modified during the course of the study, describe the changes (what, why, when, and how).	These modifications are related to the general level of the study and not to the individual level (as item 9). These unforeseen modifications to the intervention may occur during the conduct of the study and the modification/s and the reason/s for it, need to be reported to assist future studies.
11. How well (planned): If intervention adherence or fidelity was assessed, describe how and by whom, and if any strategies were used to maintain or improve fidelity, describe them.	This item refers to “how well” the intervention was received or delivered (e.g., how many participants did the intervention, how much of the intervention they completed and for how long). There are many tools and strategies that can be used to maintain intervention fidelity. It is necessary to describe clearly if any of these have been used.
12. How well (actual): If intervention adherence or fidelity was assessed, describe the extent to which the intervention was delivered as planned.	If it was measured, the authors need to describe the extent to which the delivered intervention varied from the planned intervention. This information can help to explain the study's findings and guide future replications of the intervention.

necessary. A less detailed intervention will be a barrier to replication and synthesis in new studies and accurate use in clinical practice.

To reduce language barriers and increase the completeness of intervention reporting, TIDieR has been translated into French, German, Italian, Spanish, Turkish, and Chinese, and is now available in Brazilian Portuguese. These translations facilitate the use of TIDieR during the planning and reporting of clinical trials, making them more viable to be implemented and replicated, and contributing to more transparent health research worldwide. The original version in English of TIDieR and all the translations can be accessed on the EQUATOR Network website (www.equator-network.org/reporting-guidelines/tidier/) and the TIDieR Guide website (www.tidierguide.org). The TIDieR Guide website also contains an authoring tool that guides authors of trials and developers of interventions through completing each of the TIDieR items and produces a document that contains the intervention details.

Conflicts of interest

None.

Acknowledgment

We would like to thank Gisela C. Miyamoto, Lisandra Almeida, Lívia G. Fernandes, and Tatiane da Silva for participating in the process of translation TIDieR into Brazilian-Portuguese. Mariana N. Leite is the recipient of a PhD scholarship from Sao Paulo Research Foundation (FAPESP-Brazil), and Tiê P. Yamato is the recipient of a research grant from Sao Paulo Research Foundation (FAPESP-Brazil). This editorial did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

References

- Schroter S, Glasziou P, Heneghan C. Quality of descriptions of treatments: a review of published randomised controlled trials. *BMJ Open*. 2012;2. <https://doi.org/10.1136/bmjopen-2012-001978>.
- Hoffmann TC, Glasziou PP, Boutron I, et al. Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide. *BMJ*. 2014;348:g1687. <https://doi.org/10.1136/bmj.g1687>.
- Chan A-W, Tetzlaff JM, Gøtzsche PC, et al. SPIRIT 2013 explanation and elaboration: guidance for protocols of clinical trials. *BMJ Br Med J*. 2013;346:e7586. <https://doi.org/10.1136/bmj.e7586>.
- Schulz KF, Altman DG, Consort MD. Statement: updated guidelines for reporting parallel group randomised trials. *BMJ*. 2010;340:c332. <https://doi.org/10.1136/bmj.c332>. 2010.
- Duff JM, Leather H, Walden EO, LaPlant KD, George Jr. TJ. Adequacy of published oncology randomized controlled trials to provide therapeutic details needed for clinical application. *J Natl Cancer Inst*. 2010;102:702–705. <https://doi.org/10.1093/jnci/djq117>.
- Glasziou P, Meats E, Heneghan C, Shepperd S. What is missing from descriptions of treatment in trials and reviews? *BMJ*. 2008;336:1472–1474. <https://doi.org/10.1136/bmj.39590.732037.47>.
- Hoffmann TC, Eructi C, Glasziou PP. Poor description of non-pharmacological interventions: analysis of consecutive sample of randomised trials. *BMJ Br Med J*. 2013;347:f3755. <https://doi.org/10.1136/bmj.f3755>.
- Albarqouni L, Glasziou P, Hoffmann T. Completeness of the reporting of evidence-based practice educational interventions: a review. *Med Educ*. 2018;52:161–170. <https://doi.org/10.1111/medu.13410>.
- Odgers-Jewell K, Ball LE, Reidlinger DP, Isenring EA, Thomas R, Kelly JT. Replicating group-based education interventions for the management of type 2 diabetes: a review of intervention reporting. *Diabet Med*. 2020;37:768–778. <https://doi.org/10.1111/dme.14158>.
- Wayant C, Bindernagel R, Vassar M. TIDieR checklist evaluation of clinical trial intervention reporting for recent FDA-approved anticancer medications. *BMJ Evid Based Med*. 2020;25:97–101. <https://doi.org/10.1136/bmjebm-2019-111249>.
- Zhang N, Tu JF, Lin Y, et al. Overall reporting descriptions of acupuncture for chronic pain in randomized controlled trials in english journals. *J Pain Res*. 2021;14:2369–2379. <https://doi.org/10.2147/JPR.S319195>.
- Yamato TP, Maher CG, Saragiotto BT, Hoffmann TC, Moseley AM. How completely are physiotherapy interventions described in reports of randomised trials? *Physiotherapy*. 2016;102:121–126. <https://doi.org/10.1016/j.physio.2016.03.001>.
- Azim FT, Burton E, Ariza-Vega P, et al. Exploring behavior change techniques for reablement: a scoping review. *Braz J Phys Ther*. 2022;26: 100401. <https://doi.org/10.1016/j.bjpt.2022.100401>.
- Vier C, Almeida MB, Neves ML, Santos A, Bracht MA. The effectiveness of dry needling for patients with orofacial pain associated with temporomandibular dysfunction: a systematic review and meta-analysis. *Braz J Phys Ther*. 2019;23:3–11. <https://doi.org/10.1016/j.bjpt.2018.08.008>.
- Leal-Junior ECP, Lopes-Martins RAB, Bjordal JM. Clinical and scientific recommendations for the use of photobiomodulation therapy in exercise performance enhancement and post-exercise recovery: current evidence and future directions. *Braz J Phys Ther*. 2019;23:71–75. <https://doi.org/10.1016/j.bjpt.2018.12.002>.
- Fandim JV, Saragiotto BT, Porfirio GJM, Santana RF. Effectiveness of virtual reality in children and young adults with cerebral palsy: a systematic review of randomized controlled trial. *Braz J Phys Ther*. 2021;25:369–386. <https://doi.org/10.1016/j.bjpt.2020.11.003>.
- Campbell M, Katikireddi SV, Hoffmann T, Armstrong R, Waters E, Craig P. TIDieR-PHP: a reporting guideline for population health and policy interventions. *BMJ*. 2018;361:k1079. <https://doi.org/10.1136/bmj.k1079>.
- Howick J, Webster RK, Rees JL, et al. TIDieR-Placebo: a guide and checklist for reporting placebo and sham controls. *PLoS Med*. 2020;17: e1003294. <https://doi.org/10.1371/journal.pmed.1003294>.
- Rhon DI, Fritz JM, Kerns RD, et al. TIDieR-telehealth: precision in reporting of telehealth interventions used in clinical trials - unique considerations for the template for the intervention description and replication (TIDieR) checklist. *BMC Med Res Methodol*. 2022;22:161. <https://doi.org/10.1186/s12874-022-01640-7>.
- Yamato TP, Maher CG, Saragiotto BT, Catley MJ, Moseley AM. Rasch analysis suggested that items from the template for intervention description and replication (TIDieR) checklist can be summed to create a score. *J Clin Epidemiol*. 2018;101:28–34. <https://doi.org/10.1016/j.jclinepi.2018.05.014>.

21. Hoffmann TC, Oxman AD, Ioannidis JP, et al. Enhancing the usability of systematic reviews by improving the consideration and description of interventions. *BMJ*. 2017;358:j2998. <https://doi.org/10.1136/bmj.j2998>.
22. Scarabottolo CC, Pinto RZ, Oliveira CB, et al. Back and neck pain and poor sleep quality in adolescents are associated even after controlling for confounding factors: an epidemiological study. *Sleep Sci*. 2020;13:107–112. <https://doi.org/10.5935/1984-0063.20190138>.
23. Yamato T, Maher C, Saragiotto B, et al. The TIDieR checklist will benefit the physical therapy profession. *Phys Ther*. 2016;96:930–931. <https://doi.org/10.2522/ptj.2016.96.7.930>.

Mariana N. Leite^{a,b}, Tammy C. Hoffmann^c, Lucas Helal^d, Daniel Umpierre^{e,f}, Tiê P. Yamato^{a,b,g,*}

^a Masters and Doctoral Programs in Physical Therapy, Universidade Cidade de São Paulo, Sao Paulo, Brazil

^b Centre for Pain, Health and Lifestyle, Australia

^c Faculty of Health Sciences and Medicine, Institute for Evidence-Based Healthcare, Bond University, Robina, QLD, Australia

^d Graduate Program in Cardiology, School of Medicine, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil

^e Exercise Pathophysiology Laboratory, Graduate Program in Cardiology and Cardiovascular Sciences, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil

^f Department of Public Health, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil

^g School of Public Health, Faculty of Medicine and Health, Institute for Musculoskeletal Health, The University of Sydney, Sydney, Australia

* Corresponding author: Masters and Doctoral Programs in Physical Therapy, Universidade Cidade de São Paulo, Rua Cesário Galero, 448 - Tatuapé, CEP: 03071-000, São Paulo, SP, Brazil.

E-mail: tiparma@gmail.com (T.P. Yamato).

Received 9 January 2023; Accepted 18 January 2023

Available online 31 January 2023