

# Making Research Look Like the World Looks: Introducing the 'Inclusivity & Diversity Add-On for Preregistration Forms' Developed During an EHPS2022 Pre-Conference Workshop

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## Introduction

The title of this paper is based on a quote from Shonda Rhimes – an American TV screenwriter, producer, and author – who is often said to be invested in issues of diversity, but says that she is merely trying to make television look like the world looks (Rhimes, 2015). In similar vein, psychological research – that often relies on Western, educated, industrialised, rich, and democratic (WEIRD) samples – is often criticised for not covering all parts of society. For example, other scholars have pointed out psychology's heteronormative tendencies (Thorne et al., 2019) and that psychological research often fails to account for BIPOC (Black, Indigenous, and other People of Colour) populations (Buchanan et al., 2021). Although it was long assumed that focusing on homogeneous (e.g., WEIRD) populations will still lead to generalisable conclusions, it is increasingly recognised that this generalisability assumption fails to account for the fact that different human populations differ in various domains (Henrich et al., 2010). For example, specific to health psychology, researchers have found that socio-structural attributes are not only associated with

the epidemiology of health conditions, but also with behavioural determinants, such as intentions and attitudes, as well as how these relate to one another and their relationship with actual behaviour (Conner et al., 2013; Rich et al., 2014; Schüz, 2017; Schüz et al., 2017, 2020, 2021; Wolfers et al., 2010). Even though such differences based on individual characteristics have already been reported in the literature, the exploration and active inclusion of this in health psychological research remains somewhat limited (Nathan et al., 2016; Szinay et al., 2023). But even beyond this generalisability perspective, the failure to account for different human populations should also be avoided from a social justice perspective (Huminuik et al., 2022; Leong et al., 2017). Health psychology can play a role in achieving an equal distribution of wealth, opportunity, and privilege, but only by involving a diverse group of participants in health psychology research. It is therefore important that researchers in health psychology not only recognise that these differences exist (without perpetuating stereotypes), but also take them into account in their research practice. In other words, in an ideal world, health psychology should be diverse (i.e., should include people with diverse backgrounds and individual characteristics, Servaes et al., 2022) and inclusive (i.e., should strive not to exclude anyone based on such characteristics, "Inclusivity," n.d.).

Other scholars often describe that research practices need to be adjusted to make diverse

populations visible in research (Ekong et al., 2022; Nagelhout et al., 2021), e.g., by incorporating a minimal set of 'diversity items' for routine data collection (Stadler et al., 2022). This requires careful thought and planning about how different groups are involved in a study. Although we hope that most researchers plan their studies carefully, recently more and more researchers and Open Science proponents advocate the use of so-called (pre)registrations, i.e., documents that make it possible to publish study plans before (parts of) the actual study are carried out (Nosek & Lindsay, 2018). In addition to the often-recognised benefits of (pre)registrations (e.g., increased transparency), they may also ensure that research plans are drawn up more clearly and carefully (Logg & Dorison, 2021; Sarafoglou et al., 2022). (Pre)registrations may therefore also be useful to make (health) psychological research both more diverse and more inclusive. However, to our knowledge there was no (pre)registration form available until now that focused on diversity and inclusivity, so we took the opportunity to develop one during a set of pre-conference workshops at the European Health Psychology Society (EHPS) conference held in 2022 in Bratislava (Slovakia).

## Preregistration & Preregr for fun, profit, exploration, and adventure

The three authors attended two half-day workshops facilitated by Dr. Chris Noone of the University of Galway and Dr. Gjalte-Jorn Peters of the Open University of the Netherlands. While we provide a brief overview of these workshops, the content can also be found on the Open Science Framework (Noone & Peters, 2022). During these workshops we learned why (pre)registrations have become popular, what the benefits are, but also why some might criticise them. Additionally, we learned how preregistration forms can be constructed and subsequently implemented in

{preregr} (Eijk et al., 2023). {Preregr} (Eijk et al., 2023) is an R package that facilitates both specifying preregistration forms as well as specifying such completed forms (i.e., (pre)registrations) in R (R Development Core Team, 2021) and exporting them to a human and machine readable format. Because of our shared interest in diversity and inclusivity, we decided to construct a (pre)registration form focused on these two aspects.

## Introducing the Inclusivity & Diversity Add-on for preregistration forms

While there are general (pre)registration forms (Bowman et al., 2020), other forms are often aimed at a specific type of research, such as qualitative and quantitative ethnographic research (Zörgő, 2023) or secondary data analysis (Akker et al., 2021). However, because we believe that all types of research should, in principle, strive to be diverse and inclusive, we decided not to develop a 'usual' standalone form, but an add-on, i.e., a form that can be added to any other existing form, such as the one for qualitative and quantitative ethnographic research (Zörgő, 2023). To make this more tangible: Suppose you want to carry out a quantitative ethnographic study and aim to involve marginalised groups in this study, but you also want to conduct your research according to Open Science principles. Our add-on allows you to register the general part of your study (e.g., your research aims) in the form for qualitative and quantitative ethnographic research (Zörgő, 2023) and then write down your strategies for conducting your research inclusively in our add-on. Version 0.1 that we developed during the set of workshops allows researchers to pre-define (1) the research team composition (if deemed safe), (2) the hypotheses taking different social groups into

**Table 1**  
Preregistration elements and description

Elements	Description
Research team composition	Explain the composition of the research team in terms of different characteristics (such as geography, sexual orientation, gender, race, ethnicity) and how those relate to the research itself. This information should only be shared if it is safe to do so. If you endanger yourself or others by sharing this information, please do not share this information.
Hypotheses	Explain if and how your data allows for disaggregation between different social groups and make this explicit in all hypotheses.
Data collection method	Explain how you will take into account the diversity of your target group in terms of data collection methods. For example, you could describe the different data collection methods you use to reach as diverse a target audience as possible.
Population	Describe the (target) population of your study and why this specific population was chosen, taking into account inclusivity and diversity.
Sample composition	Explain how you will take the diversity of your target group into account in relation to recruitment, retention, data analysis, and interpretation.
Measured variables	Explain how you decided which personal characteristics are measured in the study and how those are relevant for your study taking inclusivity and diversity into account.
Disaggregation	Explain whether and how (if applicable) your data will be disaggregated for all relevant groups separately (e.g., certain sexual minorities) also keeping intersectionality in mind (e.g., certain sexual minorities of colour) and how potential undersized groups (from a statistical point of view) will be handled in the data analysis phase. If this is not possible, explain why.
Recoded data information	If a dataset associated with the study is publicly shared, and in it variables from multiple groups have been recoded based on personal characteristics (e.g., all sexual minorities who participated rather than each sexual minority group separately), explain if and how (if applicable) you ensure that other researchers can work with the more detailed data while respecting the privacy of the participants. If this is not possible, explain why.

account, (3) how data collection methods take the diversity of the study's target group into account, (4) the study's population, (5) the sample composition, (6) which personal characteristics will be measured, (7) whether and how data will be disaggregated for all relevant groups, (8) and in the case of a publicly shared dataset, how other researchers can work with more detailed data when variables from multiple groups will be recoded based on personal characteristics (e.g., all sexual minorities who participated rather than each sexual minority group separately). More information can be found in Table 1. Using the categorisation of the different development

methods to create new preregistration forms described by Eijk et al. (2023), we followed a combination of the rationalist approach and the expert consensus method to develop our add-on. Most of the input was collected in the form of a discussion between the three authors, while direct substantive feedback was given during the workshop itself. After the workshop, the add-on was finalised and Dr. Gjalte-Jorn Peters also provided substantive and technological feedback during this period.

We have striven to make this form as generic as possible while acknowledging that it is not always necessary to include all individual characteristics in

a study plan, e.g., in a study not focusing on sexual identity it may not be necessary to assess sexual identity and we do not want our form to lead to the unnecessary assessment of such characteristics. This may seem inconsistent with our goal of promoting inclusive research, but because we also do not want our add-on to lead to unnecessary and long data collection from the respondents' perspective, we have made the consideration of which attributes to collect explicit in the form itself – this notion is in line with the principle of data minimisation (European Data Protection Supervisor, n.d.). Version 0.1 can be found through the {preregr} package (Eijk et al., 2023; Gültzow et al., 2023a). For illustrative purposes, an 'empty' version of the form can also be found on the Open Science Framework (Gültzow et al., 2023b).

If you wish to use the form, you can install the {preregr} package using:

```
install.packages("preregr");
```

Once installed, you can load the form and export it into an R Markdown template using:

```
preregr::form_to_rmd_template(
  "inclDivAddon_v0_1",
  file = "C:/path/to/a/file.Rmd"
);
```

You can then open file "C:/path/to/a/file.Rmd" and complete the form entries. The result can then be embedded in a Quarto or R Markdown file, exported to a PDF that can be posted at a registration service like the Open Science Framework, or both (for more guidance, you can consult the {preregr} documentation, Peters, 2023). For people with little R experience, we have also made available a Google Sheet document that

can be copied and filled in directly (Gültzow et al., 2023c).

## Conclusion

The developed 'Inclusivity & Diversity Add-On for Preregistration Forms' allows researchers to review and share their considerations on socio-demographic characteristics in their study along various stages, such as the team's composition, hypotheses, recruitment of participants, possibilities for data disaggregation, and data sharing. Although our new add-on is not a (perfect) solution to the problem that some populations are still underrepresented in research, including in health psychology, we believe it can stimulate more diversity and inclusivity. We also want to acknowledge that this form has been developed in a fairly simple way and therefore invite everyone to give us feedback to improve the form. Finally, we would like to thank the EHPS and especially Dr. Chris Noone and Dr. Gjalt-Jorn Peters for the opportunity to develop this form and for providing feedback on this paper. We wrote this article to raise awareness for this add-on. We therefore want to encourage readers to experiment with its use and would like it to be distributed further (e.g., through the EHPS' Open Science Special Interest Group).

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