

The design and analysis architecture of the Global Flourishing Study: Advancing knowledge through coordinated research reports

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Abstract: In this paper, we describe the design, analysis, and planning of the Global Flourishing Study (GFS) and its accompanying research papers. We discuss various influences on the planning and design of the study, including multi-purpose epidemiologic cohort studies, outcome-wide analysis templates, and multidimensional notions of flourishing. We provide an overview of the coordinated analytic strategies of several series of GFS research papers, the common methodologic approaches and shared methods review of these series of research reports, and their relations to the accompanying special collections in the Springer Nature journals and in the International Journal of Wellbeing that hosted many of these papers and publications. We respond to some recent critiques (Blanchflower, 2026) of the analytic and publication approaches that the core GFS research team has employed, and we discuss some of the limitations of, and future directions for, the GFS and the research that has emerged from it.

Keywords: Global Flourishing Study; human flourishing; coordinated analysis; preregistered studies; open science

1. Introduction to the design and analysis of the Global Flourishing Study

The Global Flourishing Study (GFS) was designed as a multi-purpose longitudinal panel research cohort study (VanderWeele et al., 2025). The study itself consists of over 200,000 individuals in 22 geographically, culturally, and religiously diverse countries and 1 territory, spanning all six populated continents, representing about 64% of the world's population, with nationally representative sampling in each country, and annual data collection on a wide range of health and well-being indicators and their potential social, economic, political, relational, communal, behavioral, religious, and familial determinants, with the fourth wave of data collection now underway at the time of writing.

There was no single overarching hypothesis guiding the design of the GFS. Rather, it was hoped that it would be a powerful open-access data resource to address numerous research questions on the distribution and determinants of flourishing around the world. From the very early stages of planning and grant writing, it was also proposed that the study itself would be accompanied by a coordinated series of analyses, each following a common template to facilitate comparability across constructs and generate cumulative insights across research questions. In this paper, we describe the influences on the design and the development of the GFS. We discuss

the coordinated series of analyses and papers and the journal special collections that hosted these, along with the accompanying research review processes. We respond to some of the recent critiques of the analysis and publications of the GFS (Blanchflower, 2026) while noting the limitations of and future directions for GFS research.

1.1 Influences on the planning, design, and analysis of the Global Flourishing Study

The plans for the design and analysis of GFS data were formed by the confluence of several related streams of work. First, a central influence was the research models and architecture of multi-purpose epidemiologic cohort studies, which have sometimes been leveraged over time to yield thousands of research papers. The Nurses' Health Study (NHS) at Harvard University (Bao et al., 2016), for example, has been run for decades, with hundreds of thousands of participants reporting repeatedly over time on an extensive array of health and health behavior questions. The NHS has advanced scientific knowledge on numerous aspects of health and its determinants over the years. Many other epidemiologic, biomedical, and social scientific studies employ similar multi-purpose longitudinal panel cohort designs.

The second influence on the design of the GFS was the development of outcome-wide longitudinal analytic templates (VanderWeele, 2017a; VanderWeele et al., 2020). Such study designs and accompanying analytic approaches examine associations between a single exposure and numerous outcomes simultaneously. These outcome-wide designs were put forward to more rapidly advance knowledge, to simultaneously see both beneficial and detrimental associations, to more easily allow for the reporting of null results by examining numerous associations simultaneously, and to reduce investigator degrees of freedom in analytic decision-making to ensure more rigorous research (VanderWeele et al., 2020). Such designs have been successfully applied to data from the Nurses' Health Study (Chen et al., 2020, 2023; Long et al., 2020), the National Longitudinal Study of Adolescent to Adult Health (Kim et al., 2025a), Midlife in the United States (Chen et al., 2026; Wilkinson et al., 2023), Growing Up Today Study (Chen & VanderWeele, 2018), Health and Retirement Study (Kim et al., 2021, 2022), Japan Gerontological Evaluation Study (Okuzono et al., 2022), English Longitudinal Study of Ageing (Stephens & Fancourt, 2020), New Zealand Attitudes and Values Study (Cowden et al., 2026a), and the UK Biobank (Papier et al., 2021), amongst others. By examining longitudinal associations between a single exposure and fifty or more outcomes simultaneously, rather than only a single outcome, and by using a common set of confounder controls across all outcomes, knowledge can be more rapidly advanced and effect sizes across outcomes more readily compared. Research applying such outcome-wide approaches to cohort studies that collect identical questions across waves, as with the Health and Retirement Study (Kim et al., 2021, 2022), was particularly straightforward and efficient.

A third major influence on the design, analysis, and planning of the GFS was the very notion of flourishing itself, understood as an irreducibly multidimensional and all-inclusive notion of complete human well-being (VanderWeele, 2017b; VanderWeele & Johnson, 2025a). Numerous conceptualizations and measures of flourishing have been put forward (Diener et al., 2010; Huppert & So, 2013; Keyes, 2002; Ryff & Keyes, 1995; Seligman, 2011; Su et al., 2014; VanderWeele, 2017b). If flourishing is understood as an all-inclusive "state in which all aspects of a person's life are good" (VanderWeele, 2017b; cf. VanderWeele & Lomas, 2023), then no measure of flourishing will be exhaustive. All measures will always be partial. The GFS flourishing assessment includes a brief measure of flourishing (VanderWeele, 2017b), but then supplements this by drawing upon items from numerous other flourishing and related well-being measures, and was further refined and expanded from cross-cultural feedback from over

150 scholars (Lomas et al., 2025a). While once again certainly not exhaustive, the GFS covers a wide range of more specific well-being constructs, though in most cases each is assessed with only a single item. The GFS further supplements these well-being assessments with numerous potential social, economic, political, relational, communal, behavioral, religious, and family determinants of well-being (Lomas et al., 2025a). Because of the multidimensional nature of flourishing, the outcome-wide designs and related approaches are particularly suitable to examine numerous flourishing outcomes at once. The multi-purpose GFS longitudinal panel cohort design was thus constructed to (i) have the same survey question in every wave in every country in order to (ii) maximally leverage outcome-wide type analyses and reporting concerning (iii) the distribution and determinants of multidimensional flourishing.

1.2 Coordinated research and analysis in the Global Flourishing Study

From the early stages of planning and grant-writing of the GFS, it was envisioned that a coordinated series of preregistered analyses would be conducted in order to leverage the consistent cross-wave and cross-country data collection of the GFS with the utilization of outcome-wide and related designs (VanderWeele et al., 2020) to examine numerous aspects of flourishing. The structure that was proposed, developed, and implemented was to have a team of researchers, each with prior or developing expertise on a specific flourishing-related construct and each of whom would write one or two papers with every wave of the GFS data focusing specifically on their construct of interest. As such, for a given wave of data, each researcher would employ what was effectively the same set of methods, analytic framework, and code, but with each emphasizing a different construct indicator, and the resulting paper focused entirely on delving into the nuances of that specific construct.

With the Wave 1 data, which was mostly collected in 2023 and released in early 2024, a descriptive paper was pursued focusing on the distribution of a specific construct indicator across countries and across demographic groups (Padgett et al., 2025a). The purpose was to map the unadjusted distribution and demographic patterning of a given construct indicator within and across all the countries with available data when the Wave 1 data were initially accessible following preregistration. Thus, for example, one researcher might examine the distribution and demographic variation of happiness across countries (Lomas et al., 2026a), another depression (Bradshaw et al., 2026), another gratitude (Okuzono et al., 2025), and another financial well-being (Bialowolski et al., 2025). The Wave 1 GFS data were also used in a second series of papers that examined a conceptually distinct research question applying a different analytic approach. Using retrospective assessments of childhood conditions and experiences that participants indexed to when they were about age 12, a “childhood predictors” paper was pursued with a synthetic longitudinal design to estimate adjusted associations between the childhood factors and the adult construct indicator of interest within and across countries, examining also potential sensitivity to unmeasured confounding and recall bias (Padgett et al., 2025b), since the analyses, unlike with the descriptive demographic papers, were intended to contribute some evidence concerning causality.

With the second wave of GFS data, which was collected in 2024 and released in early 2025, the coordinated set of analyses each examines how a single construct indicator in Wave 1 predicts a host of different flourishing and other outcome variables in Wave 2, controlling for numerous Wave 1 covariates (Padgett et al., 2026a). With the third wave of GFS data, collected in 2025 and released in early 2026, this template is being modified to examine how change in the construct indicator between Waves 1 and 2 predicts a host of flourishing outcomes in Wave 3, again controlling for Wave 1 covariates, a design that provides stronger evidence for causality (Lash et

al., 2021; VanderWeele, 2021). With the third wave of data, another series of analyses will examine which Wave 2 predictors seem to most powerfully shape a given Wave 3 construct outcome, again controlling for Wave 1 covariates, in a “covariate-lagged exposure-wide” analysis (VanderWeele et al., 2020). In some cases, the various streams of analyses for a given wave are being combined, and in other cases treated separately, given their distinct aims, with the lead author on each construct making the relevant determinations. When the fourth wave of data becomes available in 2027, it could be used for a series of coordinated analyses examining questions of mediation (VanderWeele, 2015) and the potential effects of cumulative exposure trajectories using marginal structural models (Robins et al., 2000). However, with each wave of data, each researcher leads a paper, with his or her construct indicator, employing the common methodology that the entire core GFS research team employs.

1.3 Coordinated analyses and the Springer Nature Global Flourishing Study special collection

In order to highlight and disseminate the results of the GFS research, a partnership was established with the Springer Nature family of journals to coordinate the submission and release of these results through the publication of a special collection. The editor-in-chief of *Nature Human Behaviour*, along with editors of about twenty other Springer Nature journals, participated in and helped coordinate this effort to establish this Springer Nature GFS special collection (<https://www.nature.com/collections/eaicjffaf>) of the first wave of GFS results and publications. The members of the core GFS research team were free to participate in the special collection process or to submit their papers to other journals. Manuscripts that were submitted through this process were subject to the standard editorial criteria and peer-review policies and procedures of the participating journals.

For GFS researchers who chose to participate, each prepared a draft abstract and introduction section of the manuscript, and provided the core results from the coordinated Wave 1 analyses for their construct indicator, including a common demographic summary descriptive statistics table of the GFS study population (Table 1) and unique construct-specific results (Tables 2 and 3) for the demographic analyses (Padgett et al., 2025a) and the childhood predictor analyses (Padgett et al., 2025b) referenced above. Editors of the participating Springer Nature journals reviewed submission proposals and were free to make peer-review offers for any of the paper proposals submitted by the participating GFS authors. The GFS authors could then consider the various peer-review offers that had been made for their paper, and were free to submit to any of the journals that had made peer-review offers, or to submit their paper to other journals outside of the Springer Nature set of journals. Importantly, while peer-review offers from journals participating in the special collection did guarantee peer review, they *did not* guarantee publication. As papers went through the standard peer-review process at participating journals, some were eventually accepted for publication while others were rejected following peer review.

One important feature of this coordinated analytic and peer-review process was a joint methods review. Because all of the papers in each of the two streams of GFS Wave 1 coordinated analyses used identical methodology and effectively identical code, changing only the focal construct indicator, it was deemed reasonable by the participating Springer Nature editors to carry out a joint methods review. A full-length analytic methodology paper was submitted both for the demographic analyses (Padgett et al., 2025a) and for the childhood predictor analyses (Padgett et al., 2025b). The papers were submitted to *BMC Global and Public Health*, but with editorial oversight from various editors of the broader set of Springer Nature journals participating in the special collection. Alterations and revisions to the methodology from this process would affect the analyses of all of the GFS special collection papers. With this joint

methods review, the review process across journals then took into account the outcome of the peer review of the methods papers (Padgett et al., 2025a, 2025b) by not specifically recruiting methods reviewers, as papers would all use the same standard methodology reviewed and approved at *BMC Global and Public Health*. However, any methodological issues raised by the subject-matter reviewers at each journal would need to be addressed by providing additional/complementary analyses and in accordance with editor guidance. When reviewers insisted that the methods for a particular paper were to be modified, the original coordinated analyses were still retained, in addition to the requested analyses, either as the principal analysis, or as an online supplement in order to facilitate comparison of results across outcomes using the common methodology. The additional methodological comments sometimes also proved helpful for subsequent work in revising planning for the longitudinal analyses of subsequent waves of data, including additional sensitivity analyses on reliability and explanations of missingness.

This common methods review for the entire series of papers was an important foundational aspect in more rapidly advancing the science. Around the time this process was being worked out, *Nature Human Behaviour* (2024) released an editorial entitled, “When it is and isn’t OK to recycle text in scientific papers.” Regarding methodology, the editorial commented, “It is very common that the methodology used in a given study is similar or identical to the methods used in previous work from the same author or authors. In these cases, we consider reuse of text to be appropriate or even desirable to ensure clarity and consistency. However, it is always important to cite the paper in which the method was originally described (and from which the text is reused).” Following consultation with the editors overseeing the special collection about this, the GFS core research team adopted this practice in the series of coordinated analyses and research reports, with nearly identical methods sections in each paper, with only the focal construct indicator varying, and then citing both the relevant analytic methodology paper (Padgett et al., 2025a, 2025b) and the GFS Wave 1 flagship paper (VanderWeele et al., 2025) which provided the more condensed methodological text, and summarized some of the results from the entire series of coordinated analyses. The introduction, results, and discussion of each paper varied substantially, but the methods text was typically re-used, sometimes with slight modifications, with citations as above.

The Springer Nature special collection (*Nature Human Behaviour*, 2025; <https://www.nature.com/collections/eaicjffaf>) and the flagship paper (VanderWeele et al., 2025) were published on April 30, 2025; the special collection included about 30 GFS papers that had gone through the peer-review process and had been accepted for publication by that time. Additional papers have subsequently been added to the Wave 1 GFS Springer Nature special collection as they have been accepted and published, with about 70 research papers now in the Springer Nature GFS Wave 1 special collection at the time of writing.

Work is now underway for a similar new longitudinal section of the Springer Nature collection presenting analyses of Waves 2 and 3 of the GFS, with anticipated release in January 2027. Once again, coordinated analyses are being carried out employing a common multi-wave longitudinal methodology (Padgett et al., 2026a). As noted above, for Waves 2 and 3, outcome-wide and exposure-wide designs are being employed (VanderWeele et al., 2020). Thus, for example, a single paper using Waves 1-3 will examine a given construct, such as purpose in life in Wave 2, and consider its associations with over 50 subsequent health, well-being, and related outcomes in Wave 3, controlling for a rich set of covariates in Wave 1. Each paper in the coordinated series reports the results of such analyses with over 50 outcomes in each of the participating 22 countries and 1 territory. The primary results in the main text consist of meta-analytic estimates pooled over all countries, and lengthy online supplements are used to report

the results in each country (with sample sizes in each country varying from 1,473 in Turkey to 38,312 in the United States). The supplements are generated using an open-source R script designed to help with reporting as completely and transparently as possible, at the within-country level, with additional details on matters such as varying rates of missingness of all variables and the estimates and uncertainty of all country-specific results, which are not possible to cover in the main text.

In comparing this approach with other research, a typical longitudinal analysis will use data from a panel study, generally carried out only in a single country, and examine associations between a single exposure and a single or small number of outcomes, controlling for other covariates. By employing an outcome-wide design, in each paper, for a single exposure (e.g., purpose in life), we examine 50+ outcomes, and we do so separately in 22 countries and 1 territory, thus providing in each paper analytic results roughly equivalent to what would typically be reported in about 1000 individual research papers. As discussed elsewhere (Padgett et al., 2026a; VanderWeele et al., 2020, 2025), and further below, there are limitations to such approaches in that the GFS often uses a single indicator for each construct, and it is also not possible to offer comprehensive commentary on, or interpretation of, each of the many numerous estimates across the countries and outcomes, but the expansion of knowledge is nevertheless considerable. Published examples of such longitudinal GFS analyses are now already available using two waves of data for forgiveness (Cowden et al., 2026b), life balance (Lomas et al., 2026b), suffering (Cowden et al., in press), and charitable giving (Nakamura et al., 2026).

1.4 Country-specific analyses and the International Journal of Wellbeing special collection

Each of the research papers in the various GFS coordinated analyses (Padgett et al., 2025a, 2025b, 2026a) reports the results of a random effects meta-analysis, with pooled estimates summarizing results across all countries in the main text. Measures of heterogeneity are also reported to give readers a sense as to how similar or heterogeneous results are across countries, as compared to the primary meta-analytic estimate. As noted above, for each paper, complete results for each country are given in the online supplement. In each paper, comments are offered as to how the results are similar or different across countries. The summaries offered in the text of each paper are of course a simplification of the fuller picture that the online supplement analyses offer. However, they often suffice to highlight countries in which results are strikingly different, or to group countries with roughly similar patterns or effect sizes. Such summaries are helpful in better understanding the dynamics for a single construct of interest. However, such results and summaries are less helpful in understanding the dynamics of flourishing within a given country. The results, for example, relevant for the Philippines or for Tanzania on happiness, meaning, depression, income, loneliness, etc., are spread out over online supplements of the whole series of papers.

To begin to facilitate a better understanding of the distribution and dynamics concerning flourishing within each country, an additional country-specific special collection was initiated by the International Journal of Wellbeing (IJW) (Lomas et al., 2025b). The intention for the series was both to provide greater insight into the distribution and dynamics of flourishing within each country but also to allow for a broader range of voices and perspectives on the GFS data. That introduction to the IJW special collection explicitly referenced the two series of construct-specific research reports.

The core GFS research team for the coordinated construct-specific analyses described above consisted principally of members of the Human Flourishing Program at Harvard University and the Institute for Studies of Religion at Baylor University, along with affiliates of each of these who

were at other institutions. While the countries of origin of the members of the core GFS research team spanned many of the GFS countries, the vast majority of these researchers were, at present, at Western institutions and, in most cases, had received their academic training at Western academic institutions. The country-specific IJW special collection was intended to create a forum for perspectives from authors outside of the core GFS research team who are from each of the various GFS countries. Their local knowledge could facilitate a deeper interpretation of the findings within each national context.

The core GFS research team provided analytic summaries of the various flourishing outcomes and their relations with demographic characteristics for each of the specific GFS countries. The author groups from each country were free to comment on whatever aspects of the GFS result summaries for their country that they thought most salient or of greatest interest and were welcome to add new analyses as they deemed appropriate. The series of papers in this IJW special collection essentially provide country-specific commentaries on the work of the GFS. The results in these papers are, in some sense, not novel as they are presented in the online supplements of each the various papers, but they are collected in the commentaries in a manner that would otherwise be practically inaccessible to a reader trying to better understand a specific country (rather than a specific construct), since trying to form a picture for a given country would require going through online supplements of many dozens of papers to find the relevant materials. What is buried in online supplements of many GFS papers for a given country is made transparent in the main text of each of the country-specific IJW commentaries. To ensure transparency, each paper in this IJW special collection explicitly notes that some findings have been previously reported elsewhere and provides the links to the original publications or pre-registrations from which they are drawn. Members of the core GFS research team provided not only the relevant analytic results, but also helped provide further input on the reporting and interpretation of the results themselves, and appropriate qualifications as to what could or could not be concluded. The IJW country-specific special collection for the GFS provides another lens by which to examine, and learn from, the GFS results and data.

The lead authors from each of the GFS countries for each of the commentaries typically provided historical and contemporary context for the results, highlighted relations with national issues and controversies, compared the results to other well-being research within that country, and sometimes offered reflections on comparisons with other countries. Sometimes authors also commented on relevant methodological issues for the GFS in ways that benefited from country-specific expertise. For example, Vanney et al. (2026) noted that, compared with the 2022 Argentina census data, those with less education were overrepresented and those with higher education underrepresented (the weights for Argentina had been calibrated earlier using 2010 Census data and Argentina's demographics had changed notably in the years in between). In any case, each group of the country-specific lead authors was free to comment upon the results that they thought most salient so as to give greater insight into country-specific dynamics. The special collection will eventually include all participating GFS countries.

2. Critiques of the coordinated research reporting of the Global Flourishing Study

In a recent commentary in IJW, Blanchflower (2026) critiques various aspects of the broad analytic and coordinated research approach of the core GFS research team described above. He focuses on eight country-specific papers from the IJW special collection, but comments also on the GFS more generally, and on the series of Wave 1 and Wave 2 coordinated papers. Based on the discussion above, we will respond to these various critiques offered by Blanchflower (2026). See also Blanchflower (2024) and Blanchflower, Srinivasan, and Rothwell (2024) for an analogous

critique and response concerning the Gallup World Poll, independent of the Global Flourishing Study.

2.1 Accusation of re-publication of results

The penultimate section of Blanchflower's (2026) paper is entitled, "All results have previously been published by the same authors" (p. 13). His claim is that the results in country-specific paper series have "previously been published in numerous prior papers by a large subset of these authors" (p. 13). Commenting on the construct-specific series, he further claims, "In many cases where there are two papers with the same variable the authors double dip, simply include a number of self-recall questions on childhood experiences" (p. 13). We will address each of these claims. With regard to the latter claim on construct-specific analyses, as noted above, the two preregistered series of papers are distinct in aims and analytic approach. One series examines purely descriptive demographic variation in the construct of interest over the 22 countries and 1 territory. The other series examines retrospectively assessed childhood factors, using a synthetic longitudinal design and multivariate control intended to provide some evidence for causality, on how each childhood factor might be related to the construct indicator of interest in adulthood, once again across the 22 countries and 1 territory. These were distinct streams of research, each with its own distinct prior literature, for each construct. All the analysis plans were preregistered in advance; all were transparent to the entire group of Springer Nature editors participating. This was not a covert attempt at double-dipping, but a transparent and systematic attempt to rapidly advance knowledge, leveraging the extensive GFS data. The only overlap in the results across these papers was in the demographic summary descriptive statistics of the GFS study population (typically Table 1 in each paper, and corresponding country-specific characteristics in the Online Supplement). The common summary descriptive statistics table was included in all of the proposal submissions that jointly went to the Springer Nature editors. The Springer Nature editors have subsequently asked us to clarify this point in the Springer Nature GFS collection itself, with the flagship paper (VanderWeele et al., 2025) serving as the common reference for these descriptive statistics, and this acknowledgement will soon be published also.

With regard to the country-specific series, as noted above, the results in these papers are indeed presented in the online supplements of each the various papers. Many of the online supplements are 100+ pages, given that each contains all of the country-specific results. Trying to form a picture for a given country would require going through these online supplements of many dozens of papers to find the relevant materials. What is buried in online supplements of many GFS papers for a given country is made transparent in the main text of each of the country-specific IJW commentaries. To ensure transparency, each commentary in this IJW special collection explicitly notes that some findings have been previously reported elsewhere and provides the links to the original publications or pre-registrations from which they are drawn. Moreover, the chief editors of the IJW were informed and aware of how the country-specific papers fit in with the construct-specific papers based on the proposal for the special issue. However, the IJW country-specific special collection itself provides another lens by which to learn from GFS results and data, and will be far more helpful for any given country than the construct-specific papers.

Other lenses by which we have been looking at the data (though with fewer papers and no specific special collection) have included outcome-wide studies (VanderWeele et al., 2020) of the relations of a given childhood experience to numerous adult outcomes, controlling for all other childhood variables. Another series (still forthcoming) is stratified by the world religion affiliation in its examination of both well-being, but more especially the numerous religion and

spirituality variables. The results of these too could in some sense be found by collating small subsections from online supplements of 50+ papers. However, once again, it would be exceedingly difficult for a reader specifically interested in, for example, Muslim, Buddhist, or Christian populations around the globe to find, access, and make sense of such results. These forthcoming papers also might be seen as commentaries on the data through a particular lens.

In some sense, all empirical papers are syntheses and commentaries on data, trying to make sense and interpret various aspects of it. One might alternatively take an extreme position and simply ask for the data to be published and nothing more. After all, all analyses are nothing more than syntheses of the entirety of the data. It is not entirely clear where Blanchflower (2026) stands on this issue. However, other than uniform summary descriptive statistics of the GFS population in Table 1 across most papers, there is not overlap in the main tables of the various GFS papers. There is indeed overlap between the main tables in a given paper and the online supplement subsections taken from many papers, but the main tables themselves, and the focus of the analysis and discussion, are distinct across the GFS papers, and this has been the operating principle for our research and publication approach. If one were to imagine the era before online supplements, there would be no such overlap. However, to facilitate each self-contained paper to be as helpful as possible, it seemed preferable to allow readers access to as much as possible through the online supplements.

Blanchflower's (2026) perspective that "All results have previously been published by the same authors" (p. 13) is arguably only reasonable if one takes the view that well-being is unidimensional or, as he states it, if "we assume there is some underlying wellbeing variable" (p. 9) so that "many of the variables are basically measuring the same thing" (p. 9). We strongly disagree with this perspective, and believe there is notable evidence to the contrary, to which we will also turn below.

2.2 Relation to prior well-being literature

Blanchflower (2026) argues that the literature reviews related to the GFS are partial and neglect prior work. A number of the papers he mentions are in fact cited in the Wave 1 flagship paper of the GFS (VanderWeele et al., 2025). That paper wrestles more with many of the bigger picture questions on well-being, and with situating the GFS and its results in the broader field. Most of the papers Blanchflower (2026) cites as providing the foundation for the well-being field were written by economists. The GFS flagship paper cites some of that work, but also engages with well-being work in psychology, sociology, public health, and education. The flagship paper does give 119 citations to prior work, though that certainly does not span all contributions in all disciplines.

Blanchflower's (2026) critique with regard to referencing, however, seems to have more to do with the country-specific papers, or with the papers in the coordinated series of analyses. With the coordinated series of construct-specific papers and analyses, what is most relevant to each paper is the literature on that construct, not the entirety of the more general well-being literature. Thus, what is most relevant to the paper on forgiveness is the forgiveness literature, not the general well-being/life satisfaction literature; what is most relevant to the paper on the meaning/purpose is the literature on meaning/purpose, again not the general well-being/life satisfaction literature.

With the country-specific papers, the focus of these was not principally the broader well-being literature (or what the results might contribute to the broader literature), but instead on understanding well-being within that particular country. The most relevant citations for the country-specific papers are not necessarily what economists studying well-being in the United

States and United Kingdom have published, but what the prior studies on well-being within that country have been. The primary audience of these papers might be seen not as Western well-being academics, but as the general public and academics within that particular country. The country-specific papers do not all cite each of the 50+ coordinated construct-specific papers whose online supplements they draw on (we would likely be accused of excessive self-citation if each of the country-specific papers were to cite all 50+ of the construct-specific papers). However, each of the country-specific papers do cite the GFS flagship paper (VanderWeele et al., 2025), which provides the overview of that whole series; and that flagship paper itself cites many of the construct-specific papers (published and unpublished) in the series. Blanchflower (2026) states that the online supplements of the country-specific papers are identical, but they are not identical. They do follow an identical structure, but the results are specific to that country. The countries, and their results, are not interchangeable with one another.

2.3 Universal versus context-specific results

It is perhaps never specifically stated, but sometimes it seems that Blanchflower (2026) assumes that there are universal patterns that hold across all countries, and possibly for all well-being variables. But this simply isn't the case. Blanchflower (2026) dismisses the GFS contribution on demographic relationships of well-being with marriage, education, religion, age, and other variables. He states, "It is well documented in hundreds of papers that wellbeing and ill-being are correlated with age, income, education, labor force and immigrant status, religion and political beliefs. These forefathers of happiness studies already knew most of the stuff... There is nothing much new under the sun" (Blanchflower, 2026, p. 2). However, in a number of cases, the patterns are *not* universal. For example, in most countries, it is indeed the case that the composite GFS flourishing measure (VanderWeele, 2017b) is increasing in education, but in Australia and Hong Kong it is the reverse. In many countries, composite flourishing is now increasing with age, but in Poland and Tanzania, it is decreasing with age. Even these departures from the earlier U-shaped well-being age curves, which we (Chen et al., 2022; VanderWeele et al., 2025) and others (Blanchflower & Bryson, 2025a; Udupa et al., 2023) have pointed out, is a relatively new phenomenon compared to Blanchflower's earlier work on age, even just a few years ago (Blanchflower, 2021; Blanchflower & Graham, 2021). In many countries, those who are married report higher flourishing than those who are single, but in India and Tanzania it is the reverse (VanderWeele et al., 2025). These should not be treated as outliers to some supposedly universal already-known law or pattern for well-being. These are important results in their own right, relevant to millions of, or in the case of India, over a billion, people. Part of the goal of the GFS was to examine what patterns appear to be relatively universal, and which are culturally specific, and in what ways, and to do so apart from exclusively Western contexts. Much has been uncovered in this regard. It is only the case that "nothing much new under the sun" (Blanchflower, 2026, p. 2) if one throws out all of the many exceptions to the broad patterns. The eight papers that Blanchflower (2026) comments on are not intended as contributions to support or refute a set of universal patterns or laws, but as commentary on patterns relevant to the lived context of each country.

Blanchflower (2026) repeatedly questions why these eight countries and not others, and the answer is that the intention is to eventually present results for each of the 23 GFS countries/territory in the special collection. Some of these have been published since Blanchflower's (2026) commentary; some are still under review or still being written. However, what is taking place in each of these countries is important and deserves unique attention. Each cohort is situated within a particularized historical moment and sociocultural context, and

findings from prior studies may not fully correspond to the current way in which broader factors might shape the connection between well-being and age, say, or other factors. The GFS dataset gives us another opportunity to honor participants' contributions to science by using what they have shared to enrich our understanding of the human condition and identify opportunities to promote flourishing in this unique time in human history in each country.

2.4 Unique contributions of the Global Flourishing Study

Blanchflower (2026, p. 3) downplays the importance of the GFS and the publications by arguing that, "There is nothing especially unique about the GFS." He briefly mentions a number of other international surveys with well-being data with relatively global coverage, such as the Gallup World Poll, the World Values Survey, and others. He also cites a number of ongoing longitudinal panel studies. All of the panel studies cited involve a single country, with the exception of the Come-Here study, which includes France, Germany, Italy, Sweden, and Spain (all within Europe).

What distinguishes the GFS is that it is *both* a longitudinal panel study and that it is global in scope. The GFS includes 22 countries and 1 territory, spanning all six populated continents, with three years thus far of annual panel data collection complete (with the fourth wave of data collection being fielded at the time of writing). In contrast, the global surveys cited by Blanchflower (2026) are repeated cross-sectional, not longitudinal panel studies. The longitudinal panel studies cited by Blanchflower (2026) are all in one country, or a few countries on the same continent, and do not have more global reach. That the GFS is both longitudinal panel data and relatively global in scope is what makes it unique. We view the GFS as effectively constituting 23 distinct but tightly linked longitudinal cohort studies, and the analyses described above reflect that understanding. The GFS also has much richer data on well-being than many of these other studies, with a wide range of indicators having been shaped by numerous flourishing assessments and global feedback (Lomas et al., 2025a). Many of the other surveys cited have a much narrower range of well-being outcomes. This final point Blanchflower (2026, p. 9) perhaps does not particularly appreciate, as he seems to take the position that "there is some underlying wellbeing variable" and that "many of the variables are basically measuring the same thing." We will return to this later, but even independent of the rich well-being data, the GFS is still distinct in both having longitudinal panel data and being global in scope.

2.5 Quantity of the Global Flourishing Study publications

Blanchflower (2026) comments on the number of papers that have been published to date by the core GFS research team. He contrasts it with a more limited number of papers from some of the other surveys he mentions. There are, however, studies with a comparable number of papers published per year. The Nurses' Health Study cited above has resulted in over 4000 peer-reviewed publications (McTigue, 2025) over its forty years. The Gallup World Poll, over its twenty years, has generated "thousands of academic papers" (Blanchflower, Srinivasan & Rothwell, 2024) with some indication (personal communication from Gallup) that "in the past year Gallup World Poll appeared in more than 700 academic papers." In the case of the GFS, what has allowed for its rapid publication rate has, as described above, been a tightly linked plan coordinating design and analysis. The initial conceptualizing of the GFS began in November 2018. The coordinated analyses and proposed outcome-wide approaches for the GFS were in place by early 2020. Indeed, as described above, the GFS itself was designed to powerfully leverage these outcome-wide approaches. Discussion, critique, and feedback on the analytic approaches were continuous from 2021 through the receipt of the data in 2024. The core GFS

research teams at Harvard and Baylor were formed more than a year before the first wave of data became available in early 2024. Hundreds, or perhaps thousands, of hours were devoted to code development even *before* the data were released to provide a coordinated reporting framework of results. Such coordinated dissemination of research efforts is perhaps less common in the social sciences, but it was powerful models of such research in epidemiologic contexts, as with the Nurses' Health Study group, that inspired this approach to the GFS. It was the building of a large research team and having many years to prepare for and plan the analyses that allowed for the publication of approximately 100 papers in just over a year. The 100+ (and ever-increasing) GFS papers did not spring out of nowhere, but were the result of careful preparation and planning from 2018-2025. Although the coordinated reporting approach of the core GFS team is perhaps somewhat unique, it could serve as one model for future collaborative efforts aimed at facilitating systematic knowledge accumulation through coordinated work.

Undoubtedly, the partnership with journals—the Springer Nature journals and the IJW—also helped facilitate the rapid publication rate. The proposal submission and coordinated peer-review-offer system from the Springer Nature journals facilitated more rapid publication by reducing desk rejections, which can often consume considerable time. The common methods review described above, and common code, also undoubtedly allowed for a faster publication process for many of the papers. That publication also often occurred through online open-access journals, which also reduced publication times. Blanchflower (2026) expresses skepticism explicitly over peer review times. However, this varied considerably, and especially at *Scientific Reports* (which he singles out), from reviews sometimes coming back in a matter of weeks to at other times requiring a year-and-a-half from initial submission to final publication in the special collection (e.g. Lee et al., 2026; Lomas et al., 2026a). In the case of the country-specific IJW papers, these also underwent peer review, but as these were intended principally as country-specific commentaries, rather than original research reports with distinct hypotheses, this too likely facilitated more rapid publication, as did once again the online publication model.

2.6 Methodological critiques

Blanchflower (2026) also offers some methodological critiques. He questions the use of multiple imputation. The results in Wave 1 are indeed very similar with and without multiple imputation because, although not known in advance, missing data for the Wave 1 participants was indeed fairly minimal. The multiple imputation approach becomes much more important with the second and third waves of data, as there are, in the third wave of data, for instance, 14,802 participants who responded in Wave 1 that did not respond in Wave 2 but did respond again in Wave 3. A complete-case analysis would throw out all such data. As we have noted elsewhere (Padgett et al., 2025a, 2025b, 2026a), we chose to use multiple imputation, even in Wave 1, to keep the analytic approach similar across waves. Blanchflower (2026) notes potential problems with recall, and potential recall bias, in the retrospective childhood predictor analyses. This is acknowledged in the childhood predictor papers, with attention also given to sensitivity analysis results for such recall bias (Padgett et al., 2025b; VanderWeele & Li, 2019).

Blanchflower (2026) argues that mode effects likely affect results, and we agree. However, estimating the magnitude of these effects and appropriately dealing with mode effects is not straightforward. Survey mode is not randomly assigned within the GFS within or across countries, so making inferences about causality of mode effects is complex. Gallup was more reliant on phone-based surveys in poorer countries with less reliable internet, but those countries differ systematically in many ways from the richer countries in the sample. In countries that use multiple modes, the web sub-sample is not nationally representative: Gallup used different

modes to recruit different types of participants, and older participants in particular were much more highly represented in the phone surveys. Weights were constructed to be approximately nationally representative when using samples employing both modes. Web surveys only could be re-weighted, although this would likely result in extreme weights for elderly respondents in certain countries. However, we acknowledge that this issue merits further attention. Nevertheless, as noted above, we view the GFS principally as constituting a series of 23 coordinated longitudinal panel studies, and the fact that participants' mode is kept consistent across waves will help mitigate the effects of mode in understanding longitudinal associations over time within country.

Blanchflower (2026, pp. 6-7) also briefly notes "causality issues in relation to religion and happiness, not addressed by any of these authors." This issue is explicitly noted in the flagship paper (VanderWeele et al., 2025). With the demographic analyses in the flagship paper, and in the coordinated series of demographic papers (Padgett et al., 2025a), we report these as purely descriptive and caution against a causal interpretation. In those papers, we in fact resisted reviewers who pushed for multivariate-adjusted cross-sectional contemporaneous analyses that might suggest causality, arguing that that would be left for subsequent waves of data when some evidence for causality might be more feasible with the longitudinal data (Lash et al., 2021; VanderWeele, 2021). As noted above, in contrast, the childhood analyses were intended to provide some evidence for causality, while acknowledging limitations (VanderWeele et al., 2025). Beyond this, however, the first author has written previously on questions of religion and causality (VanderWeele et al., 2016; VanderWeele & Ouyang, 2025) with numerous research papers using other data, and syntheses and handbooks, addressing these matters (Chen et al., 2020; Chen & VanderWeele, 2018; Koenig et al., 2024). Data from Wave 3 and onwards will also allow for further examination of evidence for causality with the GFS data.

2.7 Unidimensional versus multidimensional understandings of well-being

Perhaps our point of strongest disagreement with Blanchflower (2026) concerns the presumption that well-being can be reduced to one or two variables. If that is the case, then indeed the whole coordinated series of GFS papers is highly unnecessary. But, as described below, this simply is not so. It is not entirely clear if Blanchflower (2026) has a precisely articulated view on the dimensionality of well-being. However, he does write, "there is not a lot gained by including all of these variables when the main patterns can be seen, for example in two" (p. 7), or "If we assume there is some underlying wellbeing variable..." (p. 9), or "We are never told... why two or three variables wouldn't tell us the same story. This is especially relevant here as there is a large literature on several of the variables such as life satisfaction, happiness, anxiety, depression and self-reported physical health" (p. 13).

That well-being might be taken as a unidimensional phenomenon is perhaps a more common position in the economics literature than in the psychology literature, and many economists would prefer to reduce well-being to an underlying univariate variable, perhaps relying only on a single-item assessment of life satisfaction or life evaluation (Helliwell et al., 2026). However, patterns really do differ across constructs, and often in striking and important ways. At the country level, life evaluation is increasing with GDP/capita; however, strikingly, with meaning in life, the pattern is the reverse (Kim et al., 2025b). Many GFS countries now have patterns with composite flourishing and with life satisfaction that are increasing-with-age or slightly "J-shaped" (Lomas et al., 2026a; VanderWeele et al., 2025). But in many of the same countries, the same patterns do not hold with self-rated physical health. Do these distinctions and exceptions not matter? And the examples and distinctions go on, both across countries and across constructs.

Unsurprisingly, childhood abuse or neglect predicts a whole host of worse adult well-being outcomes, but not all. These same adverse childhood experiences predict *higher* levels of prosocial behaviors such as volunteering, charitable giving, and informal helping (Nakamura et al., 2025a, 2025b), and even, again strikingly, higher levels of adult experiences of beauty, across numerous countries (Lomas et al., 2026c). Are these not results worth reporting on and trying to understand more deeply? All of this is missed under what seems to be Blanchflower's (2026) prescription of reducing all of well-being to one, or two (or three?) variables. In fact, even distinct facets of the same well-being construct can have different associations, causes, and consequences (cf. Kim et al., 2021; Padgett et al., 2026b; VanderWeele, 2022; VanderWeele & Johnson, 2025a; VanderWeele & Vansteelandt, 2022). Well-being is multidimensional and should be treated as such.

In earlier correspondence with Blanchflower, the first author of the present paper argued that well-being is multidimensional and that negative states/affect were not simply the inverse of life satisfaction and that "There is good evidence that some individuals can report relatively high on depressive symptoms AND on life satisfaction. Also, just as happiness, life satisfaction, and life evaluation do not all perfectly track one another, so also with the inverse of negative states" (cf. VanderWeele et al., 2026). Blanchflower's response was simply, "That stuff is not correct." It seems he has come to the view that at least well-being and ill-being can have different patterns (Blanchflower & Bryson, 2025b) and thus two variables might be necessary. In his present commentary, at least at one point, he appears potentially open to the possibility of even three variables being needed to capture everything. There is perhaps a trend here over time in these comments towards a more fully inherently multidimensional understanding of well-being.

We do believe there is an important role for single-item evaluations of well-being, and that we can and should learn from these. We also agree with the authors of the World Happiness Report, for instance, that in certain policy settings, single-item assessments may be necessary (Helliwell et al., 2026; VanderWeele & Johnson, 2025a). What we would maintain, however, is that well-being itself is inherently multidimensional and the science of well-being will best advance by examining each of its facets separately. It is only by doing so that we will understand how the various facets of well-being and their determinants differ, and indeed how these relations might themselves differ across countries (Zambelli et al., 2025). This is precisely what the architecture of the design and analysis of the GFS is aiming to do.

3. Limitations of and future directions for the Global Flourishing Study

The GFS and the series of coordinated research reports based upon it have advanced knowledge in numerous ways and have done so rapidly. The study itself has many strengths including its large sample size, diverse geographical and cultural coverage, its nationally representative sampling, its longitudinal panel data collection, and its rich set of well-being variables. Undoubtedly, however, there are limitations. Many of the well-being constructs are assessed with a single indicator. Economists are often quite content with a single well-being indicator; some psychologists tend to be quite skeptical. We would take an intermediate position that one can learn, and often learn a lot, from single indicators of various psychosocial constructs, but that caution must be exercised. Single indicators only pick up particular facets of psychosocial constructs, and one must be attentive to what might be missed conceptually. Would patterns and relationships with gratitude or forgiveness differ had different indicators, or many indicators, of these outcomes been used? These are real limitations of the GFS.

The same indicators are also used in all countries. This has the advantage of more easily allowing for cross-country comparisons, but has the disadvantage of potentially missing some of what is most important to well-being in each specific country. Just as we believe country-specific

results are relevant to understanding well-being within each country, so also we believe country-specific and culturally-specific understandings of well-being are also important. While the GFS does draw upon cross-cultural work on understandings of well-being from more Eastern contexts and incorporated global feedback on the survey (Lambert et al., 2020; Lomas et al., 2025a), the questions are undoubtedly still shaped by Western perspectives. Future work could potentially address these limitations and supplement the GFS with culturally tailored items (VanderWeele & Johnson, 2025b).

Finally, and perhaps most importantly, while we believe that the GFS has substantially advanced knowledge, there is still the overarching question concerning, of all that has been learned, what is most important? What are we to focus on? Blanchflower (2026) raises this question, and it is an important one. It is not a question with an easy answer. If well-being is multidimensional and dynamics differ across facets of well-being, and patterns vary across countries, how do we make sense of it all? We ultimately want to ask not only how knowledge has been advanced, but what *wisdom* do we gain?

In our flagship paper (VanderWeele et al., 2025), we offered a variety of big-picture reflections trying to make sense of the various results. These included the lower well-being of youth in many countries, the seemingly important role of religion across many well-being outcomes and constructs, the potential role of adversity in often lowering flourishing but sometimes also giving rise to growth and resilience, and finally the notion (only possible with a multidimensional understanding of well-being) that different countries are flourishing in different ways, with higher-income countries often reporting high levels of life evaluation and financial security, but middle-income countries often reporting higher levels of meaning, of relationship quality, and of prosocial character (VanderWeele et al., 2025). We raised the question of how we might better carry out economic development in ways that do not compromise meaning and purpose, character, and relationships. Surely different authors would have come to a different set of broad perspectives on the most important implications of the GFS. It is in part for this reason that we have, from the beginning, released the data as an open-access resource through the Center for Open Science (<https://www.cos.io/gfs>), and we are excited to see what others learn and find in these data.

However, much more remains to be done if we are to not only advance knowledge but also to uncover the most important lessons, and to become wiser. We have benefited from numerous conversations with research and policy groups from many of the participating GFS countries, and they have often brought insight and texture to the GFS results and interpretation as they pertain to their own countries. More could be done in this regard. It was in part such considerations that also motivated the IJW country-specific series.

If well-being is ultimately multidimensional and the science of well-being best advanced by examining its facets separately, then much of what is learned and the wisdom that may be gleaned will emerge from combining the various construct-specific papers in the GFS coordinated series with the entirety of the literature in each subfield concerning those constructs. Even knowledge from quantitative empirical analysis is arguably best advanced not through a single study –regardless of how large the sample size– but through research synthesis and meta-analysis of numerous individual rigorous studies. It is perhaps difficult to precisely characterize the contribution of the GFS to research synthesis efforts. On the one hand, the GFS effectively constitutes 23 distinct longitudinal cohort studies across a range of culturally and geographically diverse countries with relatively large sample sizes. On the other hand, the same (often single-item) assessments are used across countries. If one of the construct indicators was poorly chosen, or inadequately worded, it likely affects all 23 of the individual-country cohort studies, not just

one. In our view, the construct-specific GFS results and papers should be ultimately seen as input for further construct-specific meta-analyses and research syntheses. However, given the limitations of the same single-item assessments used across all countries, the GFS should not be given undue weight in research syntheses. In meta-analysis, the results of “leave-one-out” sensitivity analyses (Borenstein et al., 2021), with a particular focus on the comparison of results when the GFS is, versus is not, included in the meta-analysis may prove particularly important.

The GFS and the accompanying analytic and publication approach were intended to rapidly advance knowledge (Padgett et al., 2025a, 2025b, 2026a; VanderWeele et al., 2020). This it has done, and it will continue to do so with the second and third, and now soon fourth, waves of GFS data available. We have, in this paper and other papers (Case et al., 2025; Lomas et al., 2025a, 2025b; Padgett et al., 2025a, 2025b, 2026a, in press; VanderWeele et al., 2025), tried to describe the design and analysis of the GFS in a transparent manner. We will continue to use a variety of approaches to not only advance knowledge but to move towards wisdom. Given the open-access nature of the data, we welcome others to do the same, whether that is through novel analyses, synthesis of prior results, commentaries on existing results, critiques of the work and its interpretation, or synthesis with other literatures. We hope that the GFS and its resulting research not only advances knowledge but ultimately also promotes flourishing.

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Author contribution statement

TVW carried out the conceptualization and original draft of the paper. BRJ, MB, BWC, YC, RGC, CF, TL, and RNP provided critical review and editing of the manuscript. TVW and BRJ secured funding for the Global Flourishing Study.

Conflict of Interest

Tyler J. VanderWeele reports consulting fees from Flourishing Solutions International, along with shared revenue received by Harvard University in its license agreement with Gloo Inc. according to the University IP policy.

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