NORC
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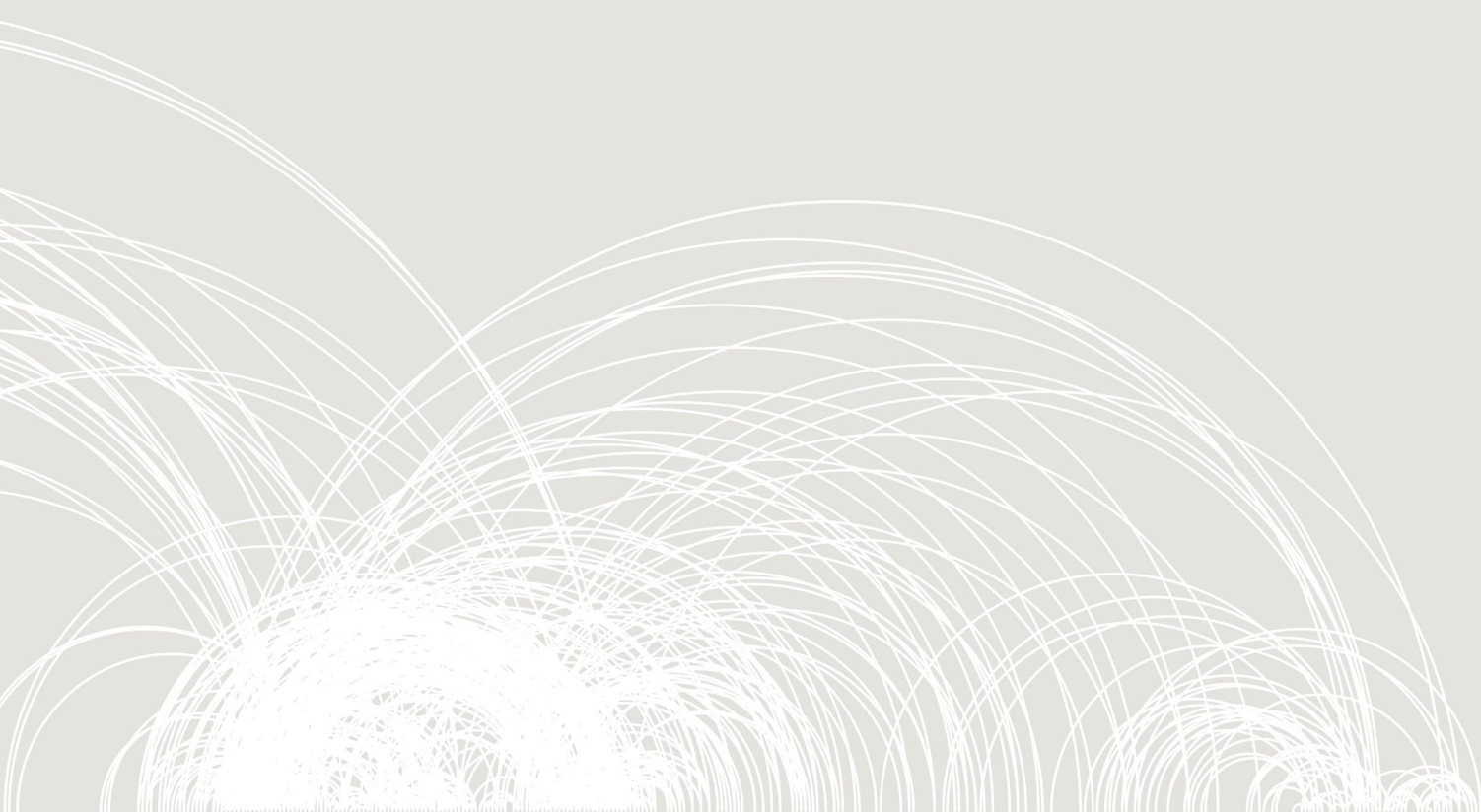
CHRR AT
THE OHIO STATE UNIVERSITY

TASK 1.2.4 RETROSPECTIVE ANALYSIS FINAL REPORT

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Executive Summary

The National Longitudinal Surveys (NLS) are a significant, long-running program of the United States (U.S.) Bureau of Labor Statistics (BLS), designed to support research into how Americans navigate changes in the economy and transition through various life course stages. As the youngest NLS cohort members are now entering their 40s, the BLS seeks to begin a new cohort of adolescents, targeted for fielding in 2026. This NLSY26 cohort will enable researchers to understand new trends in labor market experiences, education, and a wealth of other factors affecting the life course.

BLS contracted with NORC at the University of Chicago and CHRR at The Ohio State University on an NLSY Needs Assessment to provide BLS with topical content and methodological inputs that a future design team can use to create an NLSY26 survey responsive to key research goals. This report summarizes findings from a **retrospective analysis** of the two existing NLS Youth (NLSY) cohorts, the NLSY79 and NLSY97.

The retrospective analysis encompassed three distinct but related components:

- A **bibliometric analysis** that assessed the strengths of the NLSY cohorts according to research usage and impact,
- An **underused variables analysis** that identifed variables which are less well-used, and
- A **survey comparison analysis** that described the relative strengths and weaknesses of other large longitudinal surveys as well as BLS household surveys to determine the unique role of the NLSY in the Federal survey system.

Some of the **key findings from our retrospective analysis** were as follows:

- As expected, there has been a strong research usage of the NLSY cohorts in the topical areas of employment and education. **The NLSY also showed significant strength in the study of children and health (both physical and mental health).** While this may be somewhat skewed by the Children of the NLSY79 cohort, this signals opportunities for health research in a stand-alone youth cohort as well.

- **Some trends, however, were observed over time in the most studied topics,** which may reflect both the maturation of the cohorts and changing research interests in the academic community. For instance, while issues related to demography have been researched using the NLSY data for several decades, these data have begun to be used for studying gender gaps only recently.

- An analysis of the profiles of NLSY researchers and journals publishing NLSY-related research also revealed the significant impact and success of the NLSY program in social science and related fields. For example, **the citation counts of a number of NLSY researchers are reflective of prominence in their fields. Similarly, NLSY-based research has been frequently published in some of the top journals in various research fields.**

- Reflecting the research breadth of the NLSY, **our analysis of relatively underused variables found no significant questionnaire sections to be underused**. We did identify some smaller sets of underused variables, such as sets of relationship quality questions and hypothetical questions about childcare (more examples are provided in the main report). Despite important caveats about the limitations of using data downloads to measure impact of the variables, this analysis provides some information on the variables that may have less relevance to some data users and serves as a foundation to assess the inclusion of selected underused topics in other longitudinal surveys.

- **Comparisons between the NLSY and other (non-BLS) longitudinal surveys in the U.S.** demonstrated a number of places where the NLSY both differed and overlapped with other surveys. For example, compared to other U.S. surveys, the NLSY is unique in its focus on specific birth cohorts over a long time span along with the breadth of domains covered. The NLSY also maintains more of a focus on labor markets than many of the U.S. surveys that we analyzed, which focus more on other domains such as education.

- **Several international surveys have questions that may serve as valuable examples for a new NLSY cohort**. For example, gig employment questions in the *Understanding Society – The UK Household Longitudinal Study*, and robust cognitive testing measures in surveys such as *Growing Up Australia* and the *German National Education Panel Study* may serve as useful models for the development of similar questions in a new NLSY survey. Including measures in the NLSY26 that are also collected in international surveys could enable cross-country research.

- Finally, **regarding the comparison of the NLSY cohorts to BLS household surveys,** the NLSYs have the smallest sample sizes, and represent the narrowest portions of the population. At the same time, while each of the various BLS household surveys has a very specific focus, the NLSYs are unique in their topical breadth and the duration of their longitudinal coverage of individuals' lives. To the extent that there is content overlap between the NLSYs and other BLS surveys, the differences in samples and

timeframes mean that the data are almost never redundant. Rather, content overlap in the NLSYs with other BLS household surveys offers opportunities to use the larger surveys to corroborate NLSY estimates, and to use the NLSY data to dig deeper into why we might be seeing the behaviors documented in the larger surveys.

Introduction

The National Longitudinal Surveys (NLS) are a significant, long-running program of the United States (U.S.) Bureau of Labor Statistics (BLS), designed to support research into how Americans navigate changes in the economy and transition through various life course stages. As the youngest NLS cohort members are now entering their 40s, the BLS seeks to begin a new cohort of adolescents, targeted for fielding in 2026. This NLSY26 cohort will enable researchers to understand new trends in labor market experiences, education, and a wealth of other factors that are affecting this new generation.

BLS contracted with NORC at the University of Chicago and CHRR at The Ohio State University on an NLSY Needs Assessment to provide BLS with topical content and methodological inputs that a future design team can use to create an NLSY26 survey responsive to key research goals. As part of this Needs Assessment, we performed a retrospective analysis of the two existing NLS Youth (NLSY) cohorts, the NLSY79 and NLSY97. The retrospective analysis encompassed three distinct but related components: (1) a bibliometric analysis to assess the strengths of the NLSY cohorts according to research usage and impact, (2) an underused variables analysis to identify variables which are less well-used, and (3) a survey comparison analysis to identify the relative strengths and weaknesses of other large longitudinal surveys and BLS household surveys to determine the unique role of the NLSY in the Federal survey system. This report details the results of our retrospective analysis.

The rest of the report is organized as follows. Section 2 describes how we conducted the bibliometric analysis and summarizes its key findings. Section 3 explains the underused variables analysis, focusing on the complexity of mining our database records for downloaded variables. Section 4 of the report summarizes our investigation of other large, longitudinal surveys and demonstrates the unique position occupied by the NLS among BLS household surveys.

Several appendices support the report's findings. Appendix A provides additional information about the bibliometric analysis, and Appendix B details the full set of underused variables. Appendix C describes the criteria used to select longitudinal surveys for the comparison task, while Appendix D provides significant detail about each of the non-BLS surveys examined.

Bibliometric Analysis

Overview

A bibliometric analysis is a quantitative methodology often used to assess the quality and/or impact of academic journal articles, authors, and publishing journals. According to Donthu et al, "[s]cholars use bibliometric analysis for a variety of reasons, such as to uncover emerging trends in article and journal performance, collaboration patterns, and research constituents, and to explore the intellectual structure of a specific domain in the extant literature."[1]

In the context of the NLSY26 Needs Assessment, a bibliometric analysis can illustrate the research breadth of the NLSY79 and NLSY97 data and can help to identify the research topics for which the NLSY data has been most often used, the degree of impact of published articles that have used NLSY data (based on, for example, the degree to which they have been published in top journals, and the degree to which they have been cited by other articles), and the keyword or keyword phrases most often appearing in the abstracts of published articles that have used NLSY data. A bibliometric analysis can also reveal patterns or changes in the use of the NLSY data over time. Such a retrospective analysis of the NLSY79 and NLSY97 data is an important aspect of determining the research value of the current NLSY cohorts and accordingly informing the design and content of topics in a potential new cohort.

Methodology

Creation of a List of Relevant Articles. We curated relevant articles for the bibliometric analysis from the Web of Science (WoS) and Scopus bibliographic databases.[2] Our approach started with a base list that was created using the advanced search function available in the NLS Annotated Bibliography, on which we applied the following Boolean search operator: *(Journal Articles) and (NLSY79 or NLSY97 or Children of NLSY79 or Young Adults of NLSY79)*. This resulted in approximately 3,900 citations. We then searched for NLSY-related articles on WoS

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[1] Naveen Donthu, Satish Kumar, Debmalya Mukherjee, Nitesh Pandey, and Weng Marc Lim. "How to conduct a bibliometric analysis: An overview and guidelines." *Journal of Business Research*, Volume 133, 2021, pages 285-296, ISSN 0148-2963, https://doi.org/10.1016/j.jbusres.2021.04.070.

[2] Bibliometric researchers recommend using a merged citation dataset from WoS and Scopus for analysis because the two databases have different advantages. WoS covers more years with breadth across major disciplines, especially in Western journals, whereas Scopus provides more publication coverage in terms of additional fields and document types that can identify niche areas or disciplines outside WoS's scope. The two databases were found to have high average correlations in fields like social and health sciences, but neither one was found to be superior over the other (Echchakoui, 166-7). Using both databases ensures broad coverage of NLSY topics and research.
See Echchakoui, S. Why and how to merge Scopus and Web of Science during bibliometric analysis: The case of sales force literature from 1912 to 2019. *J Market Anal* 8, p165–184 (2020). https://doi.org/10.1057/s41270-020-00081-9.

and Scopus using the following search terms: *NLSY, NLSY79, NLSY97, NLSCYA, NLSY Children and Young Adult, National Longitudinal Surveys, National Longitudinal Survey of Youth*. WoS provided approximately 2,400 citations and Scopus around 2,100 citations, which were saved in marked lists on their respective websites. The marked lists from WoS and Scopus were then cross-checked against the NLS Annotated Bibliography's base list to find matches and non-matches. The successful matches were the first group of citations added to the curated list. [3]

To address non-matches, items remaining on the NLS Annotated Bibliography's base list not found by the WoS or Scopus initial searches were then searched for individually and added to the marked lists on each respective website. Conversely, non-matches found in the WoS and Scopus initial searches that were not on the NLS Annotated Bibliography's base list were verified individually for their NLSY relevance and added to the NLS Annotated Bibliography where appropriate. Non-NLSY articles were discarded.

Following the above process, each marked list was downloaded from the WoS and Scopus websites and then compared to remove duplicates. After de-duplication, additional document types such as meeting abstracts, editorial materials, and reviews were also removed, resulting in a final curated list of 3,829 articles (comprising 3,499 WoS entries and 330 additional Scopus entries).[4] The Scopus data were transformed to match WoS field tags in order to input the list into the R bibliometric package.

Analysis of the Bibliometric Database. Our analysis of the curated list of journal articles and choice of analytic metrics focused on the impact of the identified articles as well as that of their authors and the journals in which the articles appear, as listed below. We completed this information on authors and sources with visualizations of key topics of NLSY research and how those topics have evolved over time. These data provide insight into the key research areas supported by the NLSY program.

- *Journal Articles (Documents):* We assessed the current count of articles that use NLSY-related research as their basis and identified the articles with the broadest reach in terms of citation count.

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[3] The bibliometric analysis was conducted using R Studio with the Bibliometrix package (see Aria, M. & Cuccurullo, C. bibliometrix: An R-tool for comprehensive science mapping analysis, *Journal of Informetrics* 11(4), p959-975 (2017), Elsevier). Since it is not possible to directly import citations from the NLS Annotated Bibliography into the Bibliometrix package, we primarily relied on WoS and Scopus for our analysis but ensured that we were not missing any additional articles from the NLS Annotated Bibliography by conducting cross-checks.

[4] While the focus of the bibliometric analysis was journal articles, items like proceedings papers that were published as articles were left in the list along with research notes due to the same editorial review process, rigor, and validity as research articles. See Jacques, Christopher N. Research Notes vs. Research Articles. *The Prairie Naturalist* 45, p2-3 (2013). https://digitalcommons.unl.edu/tpn/124/.

- ▪ *Authors:* We produced counts of distinct journal-article authors in the NLSY research data set, along with a list of the top authors who are the most prolific. We assessed author impact using the H-Index.[5] For an individual author, the index is based on the set of the researcher's most cited papers and the number of citations that they have received in other people's publications.

- ▪ *Publications (Sources=Journals):* We produced the number of distinct journals publishing NLSY research and a list of the most-used journals for NLSY-related articles. We also examined the Journal Impact Factor (JIF) for each of the top 20 journals[6], as well as the Journal Impact Factor Quartile.[7]

Key Findings

Section 1 in Appendix A presents various descriptive statistics about the curated bibliometric database. In what follows, we highlight specific findings related to the usage, success, and impact of the NLSY cohorts.

Research Breadth of the NLSY. A major goal of the bibliometric analysis was to identify key research areas where the NLSY has been most commonly used (see Section 2 of Appendix A for further discussion of research topics and trends). Exhibit 1 shows a tree map of the most common two-word phrases appearing in the abstracts of articles in our bibliometric database. It should be noted that we excluded phrases such as "United States" and "longitudinal surveys" that did not lend insight into the topics of the articles. As anyone familiar with the NLSY would expect, "labor market" and "educational attainment" dominate the visual map of predominant topics; perhaps less expected is the third-place topic of mental health and the prominence of a number of other health topics.

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[5] See L. Bornmann, H.-D. Daniel. What do we know about the h index? *Journal of the American Society for Information Science and Technology*, 58 (9) (2007), pp. 1381-1385, 10.1002/asi.20609.

[6] JIF is a well-established journal metric used to assess the influence of journals and reflects the frequency of a journal's publications cited in the literature. It should be noted that Impact Factors are best suited to compare journals in the same subject category as citation rates vary widely between disciplines, and that newer journals will have a lower JIF but may still publish research of significant value.

[7] This is the rank of a given journal in category (X) based on where it stands relative to the total number of journals in that category. The top 25% of journals in a particular category are placed in Quartile 1 (or Q1), the next 25% in Quartile 2 (Q2) and so on.

Exhibit 1: Tree Map of Most Commonly Occurring Two-Word Phrases in Abstracts of NLSY-Related Research

Exhibit 2 is a visual map of keywords which occur together for articles in the bibliometric database (again after removing generic keywords such as "longitudinal" or "survey"). Circle sizes indicate the frequency of each keyword, lines indicate relationships among keywords, and the proximity of circles is an indication of the frequency of co-occurrence. This network analysis of topics occurring in tandem shows a large cluster of traditional NLSY topics including income, earnings, employment, marriage, and work. This cluster also includes terms such as race, women, and inequality; likely reflecting the utility of the NLSY for studying racial and gender disparities in labor market outcomes.. This analysis also shows a significant linkage between children and health; while this is likely influenced by the Children of the NLSY79 cohort, it signals opportunities for health research in a stand-alone youth cohort as well.

Exhibit 2. Co-Word Network Analysis (Based on Database Keywords)[8]
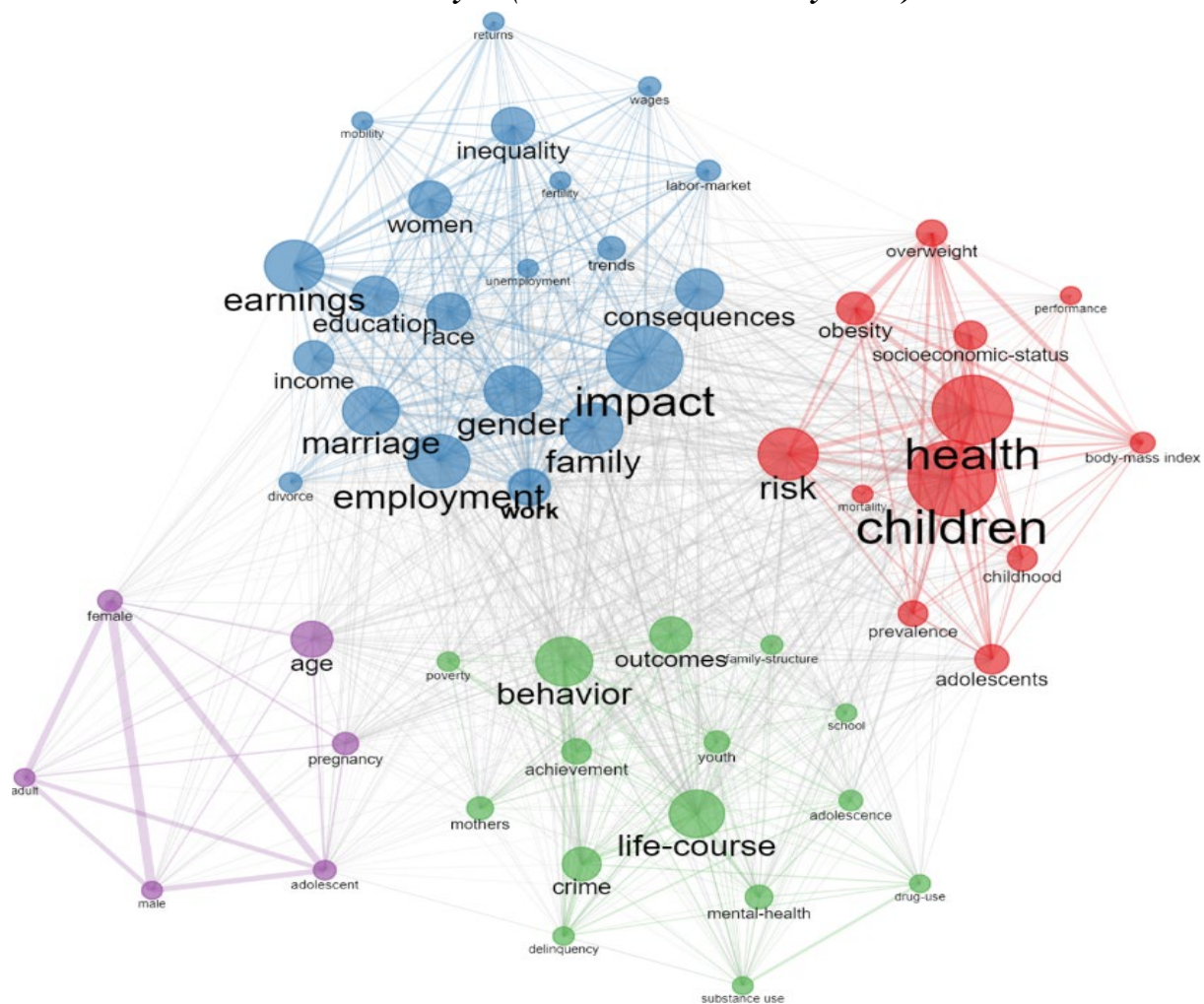
Trends in Research Using the NLSY. Changes in the most studied topics over time may reflect both the maturation of the cohorts and changing research interests in the academic community. Two key charts which summarize the most important NLSY research topics while showing trends over time are included below. Exhibit 3 shows changes in employment-related topics over time, and Exhibit 4 shows non-employment topic trends. These charts are essentially box plots, with the line across years representing the interquartile range and the dot showing the median year. The size of the dot is related to the number of articles on that topic, and the length of the line then provides a measure of the breadth of years over which the topic has been primarily researched. For example, the "demography" topic in Exhibit 4 has a frequency of 16 (meaning

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[8] There are two types of keywords available in WoS and Scopus: Bibliographic database-supplied keywords and Author-supplied keywords. This exhibit is based on database-supplied keywords. We focused our analysis on database-supplied keywords because we noted a tendency of some authors to include an overly lengthy list of keywords, presumably to increase search engine hits; based on our review, database-supplied keywords seem to better reflect the focus of the articles.

that this topic appeared in the database keywords of the bibliographic dataset 16 times), with Q1=1993, median=1994, and Q3=2008. In contrast to issues related to demography, the NLSY data have begun to be used for studying gender gaps only recently (from 2016 onwards; see Exhibit 3).

Exhibit 3. Trends in Employment-Related Topics
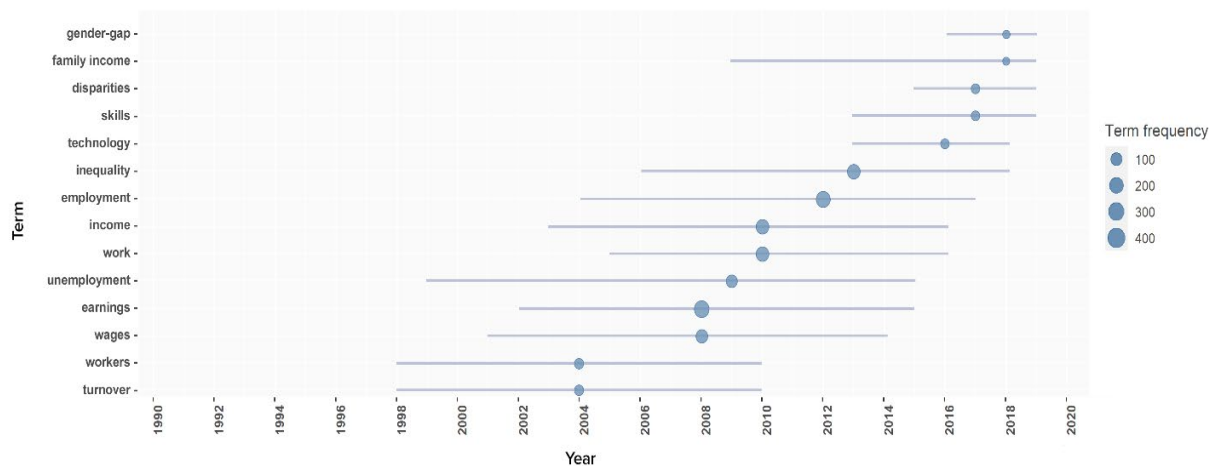
Exhibit 4. Trends in Other Topics
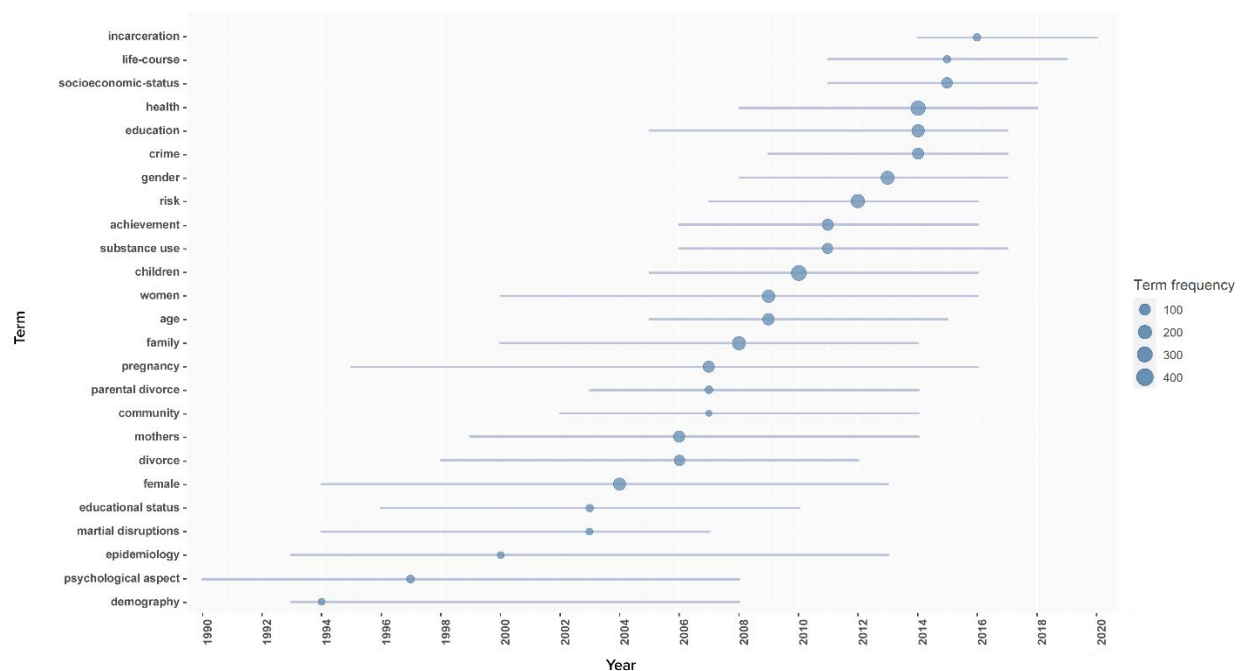
Additional charts showing trends in research topics over time are included in Appendix A (see exhibits A-6 and A-7 in this appendix, which show the top keywords for each decade from 1979-2022). While it was not feasible to undertake a systematic investigation of how trends in NLSY-

based research compares with trends more broadly in economic and sociological research, some of the shifts in NLSY-based research topics do seem to track research issues that have received significant attention lately (for example, based on media coverage). Examples include disparities among groups, inequality, gender gaps, technology and job skills, and incarceration. These are all topics which have achieved prominence in NLSY research in the last decade or so as well.

Impact of Authors Who Have Used NLSY Data. The influence and reach of the NLS are also key areas of interest for this analysis. We included several measures to assess the impact of NLSY research. To demonstrate the impact of NLSY authors, Exhibit 5 shows the H-index of the top 20 researchers most often cited in other NLSY research. In this exhibit, the H-index for local impact is based on the frequency of citations within the dataset of NLSY research while the H-index for global impact is based on all of the author's publications. Research fields are listed from most to least common for each author. As seen from Exhibit 5, the index scores of these top authors are reflective of prominence in their respective fields. Section 3 in Appendix A provides additional information about NLSY authors.

Exhibit 5. Local and Global H-Index of Top 20 NLSY Authors[9]

Authors	Local Impact	Global Impact	Research Field Categories
Rodgers JL	25	40	Psychology, Genetics Heredity, Behavioral Sciences, Social Sciences, Demography, Sociology, Statistics
Rowe DC	21	42	Psychology, Behavioral Sciences, Genetics Heredity, Neurosciences, Psychiatry, Criminology, Biology
Brooks-Gunn J	20	95	Psychology, Family Studies, Pediatrics, Public Environmental Occupational Health, Psychiatry, Social Work, Sociology
Harford TC	17	37	Substance Abuse, Psychology, Psychiatry, Public Environmental Occupational Health, Health Care Sciences, Health Policy
Heckman JJ	17	88	Economics, Social Science Mathematical Methods, Statics, Industrial Relations Labor, Multidisciplinary Sciences,
Mott FL	17	26	Demography, Family Studies, Sociology, Political Science, Social Sciences, Public Environmental Occupational Health, Economics
Korenman S	15	18	Demography, Economics, Public Environmental Occupational Health, Family Studies, Educational Research, Health Care Sciences, Psychology, Health Policy, Social Work, Sociology

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[9] The Bibliometrix package only produces H-index values for author impact within the bibliometric dataset. To provide some assessment of the impact of these authors on a more holistic level, we looked up the top 20 authors individually for their global H-index and most common research fields. The research fields column represents the most common and dominant themes of each author's research.We limited our analysis to the top 20 authors (identified based on citation counts) because it was not feasible to find a global H-index for all authors in the bibliometric dataset. Therefore, we caution that the listed authors in Exhibit 5 are not necessarily the most prominent authors who have written NLSY-based research articles, but based on citation counts we would expect that authors with the most influential NLSY research should be represented.

Authors	Local Impact	Global Impact	Research Field Categories
Van Hulle CA	15	32	Psychology, Genetics Heredity, Behavioral Sciences, Psychiatry, Neurosciences, Pediatrics
D'Onofrio B	14	46	Psychiatry, Psychology, Genetics Heredity, Behavioral Sciences, Neurosciences, Public Environmental Occupational Health
Kaestner R	14	31	Economics, Health Policy, Health Care Sciences, Public Environmental Occupational Health, Demography, Family Studies, Public Administration, Educational Research, Sociology
Veum JR	14	13	Economics, Industrial Relations Labor, Psychology, Sociology, Demography, Political Science, Public Administration
Wolpin KI	14	39	Economics, Industrial Relations Labor, Social Sciences, Statistics, Demography, Business Finance
Abrams B	13	47	Public Environmental Occupational Health, Obstetrics Gynecology, Nutrition Dietetics, Pediatrics, Biology, Women's Studies
Averett S	13	18	Economics, Engineering Industrial, Demography, Public Environmental Occupational Health, Health Policy, Health Care Sciences, Educational Research, Family Studies, Business Finance, Industrial Relations Labor
Lahey BB	13	84	Psychology, Psychiatry, Pediatrics, Behavioral Sciences, Genetics Heredity, Neurosciences
Moore KA	13	31	Family Studies, Social Sciences, Psychology, Sociology, Public Environmental Occupational Health, Pediatrics, Demography, Social Work, Biology, Educational Research
Prause J	13	14	Psychology, Substance Abuse, Psychology, Public Environmental Occupational Health, Criminology, Psychiatry
Reagan PB	13	21	Economics, Pediatrics, Public Environmental Occupational Health, Obstetrics Gynecology, Business Finance, Medicine General, Nutrition Dietetics, Social Sciences - Biomedical
Rehkopf DH	13	32	Public Environmental Occupational Health, Medicine General, Social Sciences – Biomedical, Health Care Sciences, Health Policy, Pediatrics, Psychology, Sociology, Economics
Waldfogel J	13	54	Social Work, Economics, Family Studies, Psychology. Social Sciences, Public Administration, Political Science, Industrial Relations Labor, Sociology, Demography

Impact of Journals That Have Published NLSY-Based Papers. It is also important to track the impact of journals that have published NLSY-based research. Exhibit 6 presents the JIF and Journal Citation Index (JCI) scores of the 20 journals which have published NLSY-based research most frequently. This table demonstrates that NLSY-based research has been frequently published in some of the top journals in various research fields, with nearly all falling in the top quartile in their field, and many in the top decile.

Exhibit 6. JIF Scores (2020) of Top 20 Publication Sources[10]

Source	JIF	JIF Rank	JIF Quartile	JIF Percentile	JCI
American Sociological Review (cat: Sociology)	9.654	1/149	Q1	99.66	4.53
Journal of Labor Economics (cat: Economics)	4.119	60/376	Q1	84.18	1.91
(cat: Industrial Relations)		7/30	Q1	78.33	
Demography(cat:Demography)	3.984	2/29	Q1	94.83	1.8
Journal of Human Resources (cat: Economics)	5.485	26/376	Q1	90.21	2.18
(cat: Industrial Relations)		1/30	Q1	98.33	
Journal of Marriage and Families (cat: Family Studies)	3.896	6/46	Q1	88.04	1.63
(cat: Sociology)		18/149	Q1	88.26	
Developmental Psychology (cat: Psychology, Developmental)	3.845	18/77	Q1	77.27	1.27
Pediatrics (cat: Pediatrics)	7.125	4/129	Q1	97.29	2.66
American Economic Review (cat: Economics)	9.17	3/376	Q1	99.34	3.05
Social Forces (cat: Sociology)	3.575	23/149	Q1	84.9	1.5
Child Development (cat: Psychology, Developmental)	5.899	6/77	Q1	92.86	2.21
(cat: Psychology, Educational)		3/61	Q1	95.9	
Journal of Political Economy (cat: Economics)	9.103	4/736	Q1	99.07	3.13
Annual Review of Psychology (cat: Psychology)	18.288	1/77	Q1	99.35	NA
(cat: Psychology, Multidisciplinary)		2/140	Q1	98.93	
Review of Economics & Statistics (cat: Economics)	6.548	16/376	Q1	95.88	2.18
(cat: Social Sciences, Mathematical Methods)		3/52	Q1	95.19	
Journal of Health Economics (cat: Economics)	3.883	68/376	Q1	82.05	1.42
(cat: Health Care Sciences & Services)		29/107	Q2	73.36	
Quarterly Journal of Economics (cat: Economics)	15.563	1/376	Q1	99.87	6.19
Journal of Economic Literature (cat: Economics)	8.604	5/376	Q1	98.8	3.26
Social Science Research (cat: Sociology)	2.322	61/149	Q2	59.4	1.21
Journal. Of Health and Social Behavior (cat: Psychology, Social)	4.462	10/65	Q1	85.38	1.4
(cat: Public, Environmental, Occupational Health)		21/176	Q1	88.35	
Future of Children (cat: Family Studies)	3.267	9/46	Q1	81.52	2.42
(cat: Health Policy & Services)		22/88	Q1	75.57	
Alcoholism-Clinical and exp. Research (cat: Substance Abuse)	3.455	12/21	Q3	45.24	1

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[10] Journal sources referenced in the curated bibliometric dataset were ranked by their total citations count. Exhibit 6 shows the top 20 publication sources based on this method (see Exhibit A-10 in Appendix A for the citation counts of these top 20 journals). Bibliometrix does not directly provide the JIF scores, so we retrieved this information from https://jcr.clarivate.com/jcr/home. However, it was not feasible to look up all of the nearly 700 journals which have published NLSY research. We used bibliometrix to identify the top 20 journals with the most NLSY research and then retrieved JIF scores for those journals.

We also investigated changes in journals publishing NLSY-based articles over time, to illustrate changes in research interests. Exhibit 7 shows the research fields of the top 50 journals with the most NLS articles (or more, in the case of a tie) by (rough) decade, with the top 8 fields in the most recent decade highlighted to trace their evolution back to 1979. The exhibit suggests some shifts in fields publishing NLSY-based research. While economics has remained at the top spot across all four decades, it does decline slightly in share of articles for the most recent period, and the related field of Industrial Relations & Labor has also declined. Sociology gained in strength after the advent of the NLSY79 child and young adult, and criminology continues to increase its position. Social Sciences – Biomedical (representing two journals, *Social Science and Medicine* and *Journal of Health and Social Behavior*) also shows a continued improvement across decades. Section 4 in Appendix A includes more data about publication sources and research fields.

Exhibit 7: Research Field for Top 50 Journals, Number of Articles by Decade[11]

1979-1990		1991-2000		2001-2010		2011-2022	
#	Field	#	Field	#	Field	#	Field
27	Economics	166	Economics	227	Economics	196	Economics
20	Family Studies	79	Family Studies	97	Family Studies	115	Family Studies
11	Demography	65	Sociology	64	Sociology	109	Sociology
11	Political Science	52	Industrial Relations & Labor	56	Psychology	85	Demography
7	N/A	50	Psychology	50	Demography	70	Psychology
7	Social Issues	41	Demography	42	Industrial Relations & Labor	50	Criminology & Penology
7	Psychology	13	Substance Abuse	27	Health Policy & Services	48	Social Sciences, Biomedical
6	Education & Educational Research	9	Political Science	20	Social Sciences, Biomedical	42	Industrial Relations & Labor
5	Industrial Relations & Labor	6	Social Issues	19	Criminology & Penology	32	Public Health
4	Ethnic Studies	6	Social Sciences, Biomedical	16	Pediatrics	30	Health Policy & Services
3	Criminology & Penology	6	Social Work	11	Political Science	16	Social Issues
3	Public Health	4	Criminology & Penology	10	Public Health	13	Social Sciences, Interdisciplinary
3	Sociology	4	Ethnic Studies	7	Social Work	11	Education & Educational Research
2	Psychiatry	4	Pediatrics	7	Substance Abuse	10	Social Sciences, Mathematical Methods
1	Business, Finance	4	Public Health	7	Womens Studies		

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[11] We used Bibliometrix to identify the top 50 journals by number of NLS articles (plus ties) for each time period and then consulted Journal Citation Reports (https://jcr.clarivate.com/jcr/browse-journals) to gather the primary fields of study. Because we had to look up each journal individually, it was not feasible to perform this exercise for all articles in the dataset. Note that we combined several subfields of Psychology (applied, developmental, educational, multidisciplinary and social) for brevity. Likewise, we shortened Public, Environmental & Occupational Health to simply Public Health in the exhibit.

1979-1990		1991-2000		2001-2010		2011-2022	
#	Field	#	Field	#	Field	#	Field
1	Gerontology	4	Social Sciences, Interdisciplinary				
1	Pediatrics	3	Education, Scientific Disciplines				
1	Public Administration	3	Health Policy & Services				
1	Regional & Urban Planning	3	N/A				
1	Social Sciences, Biomedical	3	Nutrition & Dietetics				
1	Substance Abuse						
123	Total	525	Total	660	Total	827	Total

Top-Ranked Articles Using NLSY Data. Article citation counts are another available indicator of the reach of the NLSY within the bibliometric analysis framework. Exhibits 8 and 9 show the significant number of citations of top NLSY articles. As with Exhibit 5 that illustrated NLSY author impact, globally cited articles are those most often referenced by all articles indexed in WoS/Scopus, and locally cited articles are those most often referenced by other articles within the dataset of NLS research.[12] A quick read through the article titles also shows the breadth of NLS research, with top cited articles including such diverse topics as school readiness, obesity, the motherhood wage penalty, and job skills formation; this breadth is apparent even if the articles using the NLSY79 Child cohort are removed from consideration.

Exhibit 8: Top Ranked Globally Cited Articles

Authors	Title	DOI/URL	# of Cites	Cohort of Data Used
Bradley R.H.; Corwyn R.F.	Socioeconomic status and child development	10.1146/ANNUREV.PSYCH .53.100901.135233	2813	NLSY79, NLSY Child
Duncan GJ; Dowsett CJ; et al.	School readiness and later achievement	10.1037/0012-1649.43.6.1428	2598	NLSY79, NLSY Child
Muthen B; Muthen LK	Integrating person-centered and variable-centered analyses: Growth mixture modeling with latent trajectory classes	10.1111/j.1530-0277.2000.tb02070.x	1688	NLSY79
Brooks-Gunn J; Duncan GJ	The effects of poverty on children	10.2307/1602387	1429	NLSY79, NLSY Child

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[12] A global citation count includes citations received by a given article from all over the world. On the other hand, a local citation count, as previously mentioned, is a bibliometrix-produced metric that represents the number of citations that a reference in the bibliometric database has received from other documents in the same database. For more information on the concepts "global citation" and "local citation," as well as to understand the relationship between various article types in a bibliometric database, please see the Venn diagram here.

Authors	Title	DOI/URL	# of Cites	Cohort of Data Used
Heckman JJ; Stixrud, J; Urzua S	The effects of cognitive and noncognitive abilities on labor market outcomes and social behavior	10.1086/504455	1357	NLSY79, NLSY Child
Gortmaker SL; Must A; et al.	Social and economic consequences of overweight in adolescence and young adulthood	10.1056/NEJM199309303291406	1021	NLSY79
Budig MJ; England P	The wage penalty for motherhood	10.2307/2657415	885	NLSY79
Pettit B; Western B	Mass imprisonment and the life course: Race and class inequality in U.S. incarceration	10.1177/000312240406900201	879	NLSY79
Strauss J; Thomas D	Health, nutrition, and economic development	http://www.jstor.org/stable/2565122	828	NLSY79
Strauss RS; Pollack HA	Epidemic increase in childhood overweight, 1986-1998	10.1001/jama.286.22.2845	787	NLSY Child
Allison PD	Missing data techniques for structural equation modeling	10.1037/0021-843X.112.4.545	766	NLSY Child
Gortmaker SL; Must A; et al.	Television viewing as a cause of increasing obesity among children in the United States, 1986-1990	10.1001/archpedi.1996.02170290022003	743	NLSY79, NLSY Child
Lochner L; Moretti E	The effect of education on crime: Evidence from prison inmates, arrests, and self-reports	10.1257/000282804322970751	660	NLSY79
Bradley RH; Corwyn RF; et al.	The home environments of children in the United States part I: variations by age, ethnicity, and poverty status	10.1111/1467-8624.t01-1-00382	634	NLSY Child
Cutler DM; Lleras-Muney A	Understanding differences in health behaviors by education	10.1016/j.jhealeco.2009.10.003	631	NLSY79
Glaeser EL; Maré DC	Cities and skills	10.1086/319563	627	NLSY79
Strauss RS	Childhood obesity and self-esteem	10.1542/peds.105.1.e15	585	NLSY Child
Hedges LV; Nowell A	Sex differences in mental scores, variability, and numbers of high-scoring individuals	10.1126/science.7604277	585	NLSY79
Cawley J	The impact of obesity on wages	10.2307/3559022	573	NLSY79
Cunha F; Heckman JJ; Schennach SM	Estimating the technology of cognitive and noncognitive skill formation	10.3982/ECTA6551	565	NLSY79, NLSY Child

Exhibit 9. Top Ranked Locally Cited Articles

Authors	Document	DOI/URL	# of Cites	Cohort of Data Used
Heckman JJ; Stixrud, J; Urzua S	The effects of cognitive and noncognitive abilities on labor market outcomes and social behavior	10.1086/504455	94	NLSY79, NLSY Child
Chase-Lansdale P; Mott FL; et al.	Children of the National Longitudinal Survey of Youth: A unique research opportunity	10.1037/0012-1649.27.6.918	79	NLSY79, NLSY Child
Cawley J	The Impact of obesity on wages	10.2307/3559022	74	NLSY79
Budig MJ; England P	The wage penalty for motherhood	10.2307/2657415	70	NLSY79
Keane MP; Wolpin KI	The career decisions of young men	10.1086/262080	55	NLSY79
MaCurdy T; Mroz T; Gritz RM	An evaluation of the National Longitudinal Survey on Youth	10.2307/146435	51	NLSY79
Cameron SV; Heckman JJ	The nonequivalence of high school equivalents	10.1086/298316	50	NLSY79
Geronimus AT; Korenman S	The socioeconomic consequences of teen childbearing reconsidered	10.2307/2118385	48	NLSY79
Western B	The impact of incarceration on wage mobility and inequality	10.2307/3088944	46	NLSY79
McLeod JD; Shanahan MJ	Poverty, parenting, and children's mental health	10.2307/2095905	45	NLSY79, NLSY Child
Averett S; Korenman S	The Economic Reality of the Beauty Myth	10.2307/146065	43	NLSY79
Cameron SV; Heckman JJ	The dynamics of educational attainment for black, Hispanic, and white males	10.1086/321014	43	NLSY79
Parcel TL; Menaghan EG	Early parental work, family social capital, and early childhood outcomes	10.1086/230369	38	NLSY79, NLSY Child
Blau DM	The effect of income on child development	10.1162/003465399558067	38	NLSY Child
Lichter DT; McLaughlin DK; et al.	Race and the retreat from marriage: A shortage of marriageable men?	10.2307/2096123	36	NLSY79
Currie J; Thomas D	Does Head-Start make a difference	10.3386/w4406	36	NLSY79, NLSY Child
Baydar N; Brooks-Gunn J	Effects of maternal employment and child-care arrangements on preschoolers' cognitive and behavioral outcomes: Evidence from the Children of the National Longitudinal Survey of Youth.	10.1037/0012-1649.27.6.932	35	NLSY79, NLSY Child

Authors	Document	DOI/URL	# of Cites	Cohort of Data Used
Cunha F;Heckman JJ; Schennach SM	Estimating the technology of cognitive and noncognitive skill formation	10.3982/ECTA6551	35	NLSY79, NLSY Child
Altonji JG; Pierret CR	Employer learning and statistical discrimination	10.1162/003355301556329	34	NLSY79
Lynch, LM	Private-sector training and the earnings of young workers	https://www.jstor.org/stable/2117617	33	NLSY79

Limitations

Bibliometric analysis is best suited for identifying broad areas of impact rather than fine details, and our analysis helped to shed light on the use of NLSY79 and NLSY97 data by domain, and by domain over time. With nearly 4,000 articles in the bibliometric dataset, it was not feasible to undertake a more disaggregated or detailed investigation of the topical focus of individual articles. For example, while it might be useful to separate articles tagged as researching "inequality" according to a main focus on education, employment, income, or some other aspect of inequality, this was not feasible to implement within the current analytic framework or the timeframe for this task. We are limited to using the keywords included in the database rather than creating our own categories or combinations of categories.

Similarly, we are constrained from exploring topics and trends at the individual cohort level by the structure of Web of Science and Scopus. It would be interesting to explore trends for the NLSY97 alone, but we would have to manually construct a new database to support such a cohort-specific analysis, which is not feasible to do within the scope of the current project. We also caution that, because the dataset includes a number of articles exploiting the family linkages between NLSY79 mothers and children, topics related to child development are very likely overrepresented compared to what would be expected from looking at the youth cohorts alone. We investigated ways to account for this aspect of the analysis, but none are feasible without examination of each individual article.

It should be noted that many measures of impact of an article are dependent on its citations in other research. While citations-based metrics are commonly used in bibliometric analysis and more citations are generally interpreted to signal greater impact, bibliometric analysis cannot disentangle the actual reasons for citations, which might pose some limitations to making inferences about influence. For example, an article might be cited by one author for its topical or methodological contributions, while another author might reference it just to illustrate a flawed methodology.

Finally, while interpreting the results of our bibliometric analysis, care should be taken to account for the fact that articles published (very) recently will not have had time to develop their citation network as fully as those with more vintage. Therefore, an apparent drop in citations in more recent years covered by the analysis should not be interpreted as a drop in the influence of the NLSY program.

Underused Variables Analysis

Overview

The second component of our retrospective analysis was an investigation of variables in the NLSY97 which are underused by comparison with the rest of the dataset. To supplement the bibliometric analysis, we also conducted an analysis of variables in the NLSY97 which are underused by comparison with the rest of the dataset. In order to conduct this analysis, we leveraged records of NLS Investigator downloads to determine the number of times each variable has been included in data extracts. We note up front that there are important caveats to this analysis and that data download does not necessarily equate to data use. Nonetheless, this analysis, referred to below as an "underused variables analysis," still serves as a useful indicator of the items that may be of least interest to researchers. It also provides an input for the analysis of comparisons of the NLSY program to other BLS and non-BLS surveys: by identifying whether these underused variables in the NLSY97 are present in other surveys, we can identify items that may be better covered in other surveys.

In what follows, we describe the process used to create the list of underused variables and the results of this analysis. In the Survey Comparison section, we then examine whether selected underused variables appear in other large, longitudinal surveys.

Methodology

We used all available years of NLS Investigator metadata for variable extracts for this analysis, which covers the period of 2013 to the present. Because BLS is most interested in research topics pertaining to adolescents and young adults to guide the development of the NLSY26 and because the time span does not cover many years of the NLSY79, we agreed with BLS to exclude the NLSY79 from this analysis and to focus exclusively on the NLSY97.

Selection of Variables from the NLSY97 for Inclusion in the Analysis. In discussion with BLS, we determined that further limits on the variables under consideration were appropriate. Specifically, we limited the types of variables considered using the following conditions:

- Only primary variables were included,
- Only respondent response questions (Variable Type=Respondent Response) from the main survey, parental response questions (Variable Type=Parent Response) from the parent survey, and family process variables (QNAME=FP_) were included, and
- Only the first 12 rounds of data were included. This covers survey years 1997-2008; respondents were ages 24-28 in 2008.

We then combined variables with the same content but slightly different QNAMES, again after discussion with BLS. Reasons variables were combined included:

- Instances in which technology changes led to changes in QNAME characters, such as an underscore (_) being changed to a tilde (~),
- Changes in naming convention between round 2 (QNAMES appended with _R2) and later rounds (QNAMES appended with _UPD),
- Changes in QNAMES for some self-administered questions from YSAQ to YSAQ2, and
- The creation of different versions of the Child Care section, in which the initial module was later considered the "long" version (YCCAL-) but the same questions were also labeled more generally YCCA-.

An automated program then reviewed each extract for a valid reference number (RNUM) attached to a QNAME stem from the list of variables that fit the above conditions. Once the program found a match within an extract, it incremented the download count by 1 for that QNAME and then ignored any subsequent appearances of that QNAME in the extract. This "top-down" method of counting downloads does not differentiate downloads from different years and so will equal 1 regardless of the number of rounds or loops the researcher included in the extract.

The output file included 4,733 variables for review. After consulting with BLS, we further refined the file to exclude core variables from the analysis.[13] All variables used in created variables and rosters were considered core, with the exception of variables in the parent questionnaire and follow-up estimates in the income and assets questions that had been used in created variables. Variables necessary to the function of the survey (for example, questions in the

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[13] It should be noted the NLSY97 parent questionnaire was not considered to be 'core' and as a result all variables were included in the analysis. In the main NLSY97 questionnaire, total interview time across the sample that is allocated to non-core questions is limited as the majority of the interview consists of core questions.

LOCATOR area of interest) were also considered core. Additionally, respondent response variables contained in the tree index under Employer-Specific Characteristics (except for the Supervisor branch) and Household Characteristics were designated as core. To speed the analysis, a number of sections were determined to be non-core without further examination. These included select areas of interest[14] and certain QNAME stem variables.[15]

Analysis of Included Variables for Patterns of Underutilization. The resulting file contained 2,445 non-core variables, which were then sorted by number of downloads from 2013 onwards. Using a threshold of 20%, agreed on with BLS, 489 variables were highlighted for consideration as underused variables and reviewed in the context of the areas of interest and questionnaire sections. In addition, each QNAME was reviewed to account for questions that were also asked under another QNAME. Doing this allowed us to account for issues such as different questionnaire paths, experimental items, or changes in text fills. We also identified questions necessary to a set of otherwise well-used questions (for example, "was there another job?"). Topics that had a large number of low usage variables were considered underutilized. These topics are listed in the underutilized variables spreadsheet included as Appendix B.

Comparison of Underused Variables in the NLSY97 to Other Surveys. A final step in our analysis was determining which topics should be investigated in the comparison to other surveys subtask. Some underused variables had already been dropped from the NLSY97 because BLS staff had already determined that they were not a useful area of investigation for the NLS. After consultation with BLS, we concluded that further investigation of topic areas which had already been rejected was not useful, and we excluded these topics from the comparison analysis task. The spreadsheet in Appendix B lists which topics were flagged for a full or limited comparison with other, longitudinal surveys (see column entitled "Assess Topic/Domain in Comparison Surveys"), as well as the reasons for no or limited comparisons.[16]

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[14] Attitudes, Autonomy & Control, Child Care, Child Family Background, Childhood Retrospective, Computer And Internet Access, Dating, Expectations, Family Process Measures, Health, Household Characteristics, Non-Res Characteristics, Parent Background, Parent Current Status, Parent Family Background, Parent Retrospective, Parents: Contact W/ Non-Res Parent, Parents: Interaction Between Parents, Political Participation, Pro-Social Activities, Sexual Activity, Substance Use, Time Use , Youth Self-Administered

[15] YCCA/YCCAL [childcare], YCOC [college choice], YCPS [CPS-based questions], YEXP [expectations], YFRD [best friend], YPOL [political participation], YSAQ [self-administered except those use for created variables/arrays], YTEL [tell us what you think].

[16] Based on discussions with BLS, topics that were not compared with other surveys included those that were deemed to be less useful for this comparative exercise, either because the questions were changed in later rounds or because the NLSY program had already determined that a set of questions was not useful to repeat in consequent waves. These questions reflect those that BLS would likely not include in a questionnaire for the new cohort and were therefore dropped from consideration for the survey comparison exercise.

Key Findings

This analysis resulted in a set of nine underused variables topics in the NLSY97 to be used in the survey comparison analysis. These include the following:

1. **Contraceptive choice.** Questions related to the respondent's knowledge and opinion about Depo-Provera and withdrawal as contraceptive methods.
2. **Domains of influence.** Questions related to the respondent's reliance on a parent or parent figure for advice about education, jobs, relationships, and financial planning.
3. **Prior marriage/fertility experiences of respondent's spouse/partner**. Questions related to previous marital relationships of the respondent's current spouse/partner, and offspring from those relationships.
4. **Quality of relationship between respondent and their spouse/partner.** Questions related to the quality of the relationship between the respondent and their current spouse/partner, including both positive and negative behaviors.
5. **Quality of relationship between responding parent and their spouse/partner.** Questions related to the quality of the relationship between the responding parent and their current spouse/partner (based on the round 1 interview), including both positive and negative behaviors.
6. **Hypothetical childcare arrangements.** Questions related to the respondent's perception of the childcare market (in terms of willingness to pay for childcare and distance to childcare).
7. **Selected questions about childhood background and experiences.** Underused questions in this larger section include:
   a. Childhood residence history, including living with both parents or with grandparents and at what ages
   b. Schooling history, including age in each grade, months of school missed, and scores on standardized tests
   c. Ages attended Head Start
   d. Custody information if not living with both biological parents
   e. Ages when lived through hardship as a child
   f. Frequency of contact with non-residential parents
8. **Selected parental background questions**. Questions about the responding parent's residence history, employment history, and receipt of government aid.
9. **Follow-up questions about income**. Follow-up questions about income in the event of refusals or "don't know" responses, as an attempt to gather as much information as possible on income; note that these are included in creation of income variables.

The next section discusses in greater detail the results of our comparison to other surveys, where we examined the availability of these measures in other sources.

Limitations

As mentioned previously, downloads of variables do not necessarily equate to data use; a downloaded variable may not end up contributing to published research. Additionally, fewer downloads may not equate to the significance of a data item; researchers may wish to study a particular construct but are not aware of variables that exist, or variables may only be used rarely but be essential for an important domain of research. Due to limits on data availability, we counted the number of downloads from 2013 onwards. Therefore, it is possible that variables deemed as being underused after this date were used (more) in earlier research.

Finally, we note that research interests change, and it is not necessarily true that a variable that was underused in the NLSY97 would continue to be underused in the NLSY26. Nonetheless, this analysis still provides a useful benchmark for the types of variables from the NLSY97 that have been used the least by researchers.

Survey Comparison Analysis

Overview

We undertook a comparison of the NLSY youth cohorts to other large, longitudinal surveys, both in the U.S. and abroad, and to other BLS household surveys. While these tasks are similar, they were undertaken using slightly different approaches for BLS and non-BLS surveys as discussed below. For non-BLS longitudinal surveys, we provide a detailed analysis of specific items in the survey as well as specific lists of variables relevant to the above identified NLSY97 underused variables. For the comparison to BLS household surveys, we present the themes and strengths of each survey and focus on the important differences between each survey and the NLSY.

Methodology

Comparison to Other Longitudinal Surveys. Prior to comparing other longitudinal surveys to the NLSY, we first created a set of surveys that were most important to be compared. In order to do so, we first defined criteria for inclusion in the set of comparison surveys. The final criteria were:

- Must include coverage of labor market topics,
- Sample size of at least 5,000 respondents,
- Respondents must be age 18 or younger in at least one round, and
- The most recent round was conducted in 2015 or later.

Additional criteria, including multiple rounds with adolescent respondents and frequent administration, were dropped when they were determined to be too restrictive. Appendix C lists all criteria (including dropped criteria) for the full list of surveys considered for the comparison task. It should be noted that two surveys, the Early Childhood Longitudinal Study – Kindergarten and the Middle Grades Longitudinal Study, were included at the direction of BLS even though they did not otherwise meet the criteria listed above. In contrast, the oldest British cohort study was excluded by BLS even though it met the criteria, because it was considered to be too old and superseded by more recent British cohort studies.

After the list of comparison surveys was approved by BLS, we developed a template for recording useful information about the various surveys. This template was flexible enough to capture a wide range of topics of interest for the survey, while helping to organize the common data points for easy retrieval by a future survey design team. It also included the list of nine underused variable topics described previously. Using this template, we reviewed the comparison surveys and recorded information about survey organization, fielding, content, and strengths and limitations relative to the NLSY.

Comparison to BLS Household Surveys. In contrast to the other longitudinal surveys, the comparison surveys at BLS are easy to define. For this task we simply created a list of the BLS-sponsored surveys conducted with households rather than employers or another type of sample. Surveys included were:

- The American Time Use Survey,
- The Consumer Expenditures Survey,
- The Current Population Survey, and
- The Telephone Point of Purchase Survey

Key Findings

Comparison to Other Longitudinal Surveys. The other survey comparisons are compiled in Appendix D. It is important to note that these comparisons are high-level overviews of complex data sets and are not exhaustive analyses. Instead, they are intended to provide guidance to a future design team looking for insight into the best sources to consider for a particular survey topic.

Comparisons between the NLSY and other longitudinal surveys demonstrated a number of places where the NLSY both differed and overlapped with other surveys. Comparing to other US surveys, the NLSY is relatively unique in its focus on specific birth cohorts, with frequent

interviews over a long-time horizon, as well as in its breadth of domains covered. The NLSY also maintains more of a focus on labor markets than many of the U.S. surveys that were analyzed, which focus more on other domains such as education. Nonetheless, there are a number of questionnaire items and approaches in these surveys that provide useful examples for an NLSY26.

The comparisons to other longitudinal surveys suggest that the closest competitor to the NLSY26 is the Transition to Adulthood (TAS) supplement to the PSID. This supplement follows all PSID sample children who are entering early adulthood (age 18-28). However, the NLSY may have advantages in sample selection. For example, as noted in Appendix D, it is somewhat difficult to evaluate whether the child sample in the TAS is nationally representative, since children are not directly sampled for the study. Rather, they are the offspring of the originally sampled members of the PSID (and that original sample was nationally representative). Nevertheless, there are some topical areas of the TAS that are especially useful to review to ensure that the NLSY26 can complement that survey and exploit opportunities for cross-survey comparisons. Particularly relevant examples include peer influence, level of independence in financial and health management, and residential transitions (see page 43 of Appendix D for more examples).

The international surveys each provide valuable examples for the NLSY26 (for example, gig employment questions in the Understanding Society – The UK Household Longitudinal Study or parental questionnaire items from the UK Millennium Cohort Study). Studies such as Growing Up Australia and the German National Education Panel Study also have robust cognitive testing measures that could provide useful examples for an NLSY26. Finally, across all the international surveys there are potentially useful measures that could enable cross-country research if included in an NLSY26.

Comparison to BLS Household Surveys. Below we present the comparison of BLS household surveys with the NLSY. The focus of this comparison was to understand the strengths of the various BLS surveys and how they compare with the NLSY, and therefore it follows a different template from the surveys outlined in Appendix D. Given the smaller number of surveys, the results of this comparison are presented below and not in a standalone appendix.

At a high level, across BLS household surveys, the NLSYs have the smallest sample sizes and represent the narrowest portions of the population. At the same time, while each of the various BLS household surveys has a very specific focus, the NLSYs are unique in their topical breadth and the duration of their longitudinal coverage of individuals' lives. To the extent that there is content overlap between the NLSYs and other BLS surveys, the differences in samples and timeframes mean that the data are almost never redundant. Rather, content overlap in the NLSYs with other BLS household surveys offers opportunities to use the larger surveys to corroborate

NLSY estimates, and to use the NLSY data to dig deeper into why we might be seeing the behaviors documented in the larger surveys.

Below we present more detailed results for each BLS survey. For each survey, we present information in the following format:

- *Themes* is copied verbatim from the documentation on the respective survey websites.
- *Strengths* lists the main focus areas of the BLS surveys and the kind of research these surveys are best suited for.
- *Contrast to NLSY* broadly compares the household surveys to the NLSY along three categories: i) research themes / topics of the survey versus the NLSY, ii) the kinds of questions asked in the survey in contrast / comparison with the NLSY, and iii) different sampling strategies of the household survey in question.
- *Used with NLSY* briefly mentions how the BLS household surveys can be used in conjunction with the NLSY.

Survey: American Time Use Survey

Themes. The American Time Use Survey (ATUS) provides nationally representative estimates of how, where, and with whom Americans spend their time, and is the only federal survey providing data on the full range of nonmarket activities, from childcare to volunteering. The ATUS itself is drawn from the subset of households that have completed month 8 of the Current Population Survey. The survey consists of eight sections, the substantive ones which include: time-use diary; work, childcare, and volunteer activities; eldercare; labor force status. Previously, the survey asked about overnight trips, but that section was replaced by questions surrounding eldercare.

Strengths. The ATUS breaks down how Americans spend their time in more granular detail than just work vs. home vs. sleep. Questions surround how much non-work-related time is spent with friends or family, on childcare, or alone, to how exactly respondents have attempted to find work in the last month. As part of the interview, respondents are asked what activities they completed the previous day, as a "time-use diary," which thus avoids respondents simply averaging out the time spent on larger activities over a longer timeframe.

Free time is also broken up into multiple categories whether the respondent reports exercising, leisurely reading, watching sports, etc. Overall, the survey totals up to 17 different activity definitions which speaks to the level of granularity and goals of the survey to truly determine how Americans spend their time.

Contrast to NLSY. The NLSY aims to track labor market outcomes over time and provide researchers with a picture of the entire life course of individuals. In contrast, the ATUS simply aims to see where Americans spend their time and allow researchers to compare and contrast for economic, health and safety, family, and work-life balance, and to provide international comparisons.

The NLSY includes extensive questions educational and labor force participation. While the ATUS does touch on these themes, there is much less depth of information given its focus on time use. In addition, because ATUS is cross-sectional it does not track changes in respondents' life circumstances across their lives like the NLSY.

The fact that the ATUS is sampled from the CPS also differentiates it from the NLSY cohorts, in that the sample is drawn from an existing BLS household survey and is not from a sample frame constructed to represent the universe of U.S. households. In addition, the age range of the households is different between the two surveys – any civilian household member who is at least 15 years old is eligible for selection in the ATUS, whereas the NLSY samples only specific birth cohorts of individuals to be followed over time.

Used with NLSY. The ATUS provides a picture of how Americans spend their time that can complement the longitudinal life-course information in NLSY about how the labor market trajectories of individuals evolve over their career.

There could be exchange between the NLSYs and the ATUS. For example, an activity that emerged as a strong determinant of labor market outcomes could be added to the ATUS for measurement of time spent. Or an NLSY cohort could implement an ATUS-style method of questioning in a given round to better understand individuals' time use at different points over the life course. Round 1 of the NLSY97 included some time use questions for disconnected youth (those not in school or working), although the methodology used was less sophisticated than the ATUS question-framing. The ATUS and the NLSY have on occasion asked the same questions, as with questions about work schedule predictability and worker autonomy in scheduling.

Survey: Consumer Expenditure Surveys

Themes. The Consumer Expenditure Surveys (CE) program is a national survey conducted by the U.S. Census Bureau on behalf of BLS. The program collects the data needed for the calculation of the Consumer Price Index (CPI), the most commonly used measure of inflation in the U.S. BLS has been conducting this survey since 1980. Currently, the list of households from which the sample of the Consumer Expenditure Survey is drawn is taken from the U.S. Census Bureau's

Master Address File (MAF) plus a group quarters file, and the survey is designed to be representative of the entire U.S. civilian noninstitutionalized population.

The survey features two components. First, the diary survey asks household respondents to keep two 1-week diaries for recording all purchases. The purpose of the diary survey is to capture small everyday purchases like food, meals, personal care products and gasoline. The diary is broken down into four sections" food and drinks for home consumption; meals, snacks, and drinks away from home; clothing, shoes, jewelry, and accessories; and all other products, services, and expenses. The second component is the quarterly interview survey that asks household respondents questions about the costs of a) large purchases such as cars or appliances and b) regular expenditures such as rent, mortgage, insurance, or utilities. The difference between this interview portion of the CES and the diary is this is more estimated total cost across a variety of areas rather than an itemized list of expenses over a shorter window.

Strengths. The CE program is the only complete source of expenditures and incomes of households in the U.S. The diary survey provides very detailed information because it asks respondents to keep a log of every purchase they make over the two-week period between interviews. In addition, because CE is primarily cross-sectional it does not track changes in respondents' life circumstances across their lives like the NLSY.
The data taken from these surveys allows BLS to track inflation, as this survey is used to build the CPI. All members of the household are asked to participate in the diary survey to track the entire households' spending.

Contrast to NLSY. At a high level, the NLSY aims to track labor market outcomes over time, whereas the CE surveys aim to measure where Americans spend their money at a point in time for the purposes of calculating the CPI.

In addition, the CE surveys do not have the number of extensive questions on educational and labor force participation that are needed in order to understand the full career trajectories and labor market profiles of American workers.

In terms of sampling, the CE surveys are sampled from a Title 13 survey frame at the U.S. Census Bureau, which is different from the survey frame used for the NLSY cohorts. The CE surveys also cover the civilian noninstitutionalized population in the U.S., while the NLSYs cover selected birth cohorts, including those who are institutionalized.

Used with NLSY. The CE surveys are a core input to inflation calculations, which are necessary for understanding changes over time in income, assets, and debt in the NLSY. In addition, the two surveys can provide complementary information for different research agendas. For

example, understanding differences in expenditure patterns across households of different income levels in the U.S. can provide important context for research using NLSY to understand how the determinants of household income over the life cycle. To date, NLSY questionnaires have included relatively few questions regarding consumption, perhaps because these questions can be time intensive. Understanding of financial well-being in the NLSY could possibly be enhanced through modeling approaches that estimate consumption patterns of NLSY respondents using CE data.

Survey: Current Population Survey

Themes. The Current Population Survey (CPS) is a monthly survey of households conducted by the U.S. Census Bureau for BLS. It is a premier source of information for current data on labor force, employment, unemployment, persons not in the labor force, hours of work, earnings, and other demographic and labor force characteristics.

Strengths. The CPS is the primary way that the U.S. economy measures its unemployment rate and job growth every month. The distinction of which business sectors respondents are in allows for accuracy in which industry is leading, or dragging, employment gains. The CPS tracks sampled households for four months, after which they are not interviewed for 8 months before returning to the sample for another four months. Therefore, the CPS maintains a longitudinal structure, albeit over a short range of time.

The CPS serves many important uses, including monthly jobs reports that are widely analyzed by the popular press and policymakers. The CPS is also widely used by the research community. It provides researchers with a breakout of different types of labor force status, from employed persons, to displaced or discouraged workers which allows for rich economic analysis on a monthly basis. Additionally, these analyses can be paired with the demographic questions in the CPS to understand how these patterns differ across demographic groups.

Contrast to NLSY. The NLSY aims to track labor market outcomes over time, whereas the CPS aims to calculate a wide range of economic indicators such as overall unemployment rate, workforce participation, and the leading sectors of employment growth.

At a high level, because the CPS only follows respondents for a short period of time it does not track changes in respondents' life circumstances across their lives like the NLSY. The NLSY includes extensive questions on educational and labor force experiences. The CPS also includes extensive question about labor force experiences, but only follows respondents over 16 months so does not measure information on every job a respondent holds over their life. In addition, the

background information on domains such as education, training, and criminal justice involvement is much more limited in the CPS than in the NLSY.

CPS employs a multistage probability sampling to select households, and the sample is drawn from a Title 13 survey frame at the U.S. Census Bureau. Unlike the NLSY, the large sample size of the CPS means it can be used to construct state- and national-level estimates. In addition, the CPS covers the entire adult age range, while only select birth cohorts are represented in the NLSY data, and even then, those are not refreshed for immigration.

Used with NLSY. The CPS can be used to provide context on how the labor market experiences of the birth cohorts represented by the NLSY compare to other cohorts of individuals. The question series in the CPS used to determine workforce participation has been asked intermittently as part of the NLSY interviews for both the 79 and 97 cohorts. The depth and breadth of the NLSY data can help to further investigate determinants of consequences of workforce participation, which are difficult within the more limited content coverage in the CPS.

The CPS data can also offer a benchmark to corroborate estimates from the NLSY samples, for example, education levels, poverty rates, or employment statistics.

Survey: Telephone Point of Purchase Survey

Themes. While the Telephone Point of Purchase Survey (TPOPS) was discontinued in 2019, we provide here a summary comparison between TPOPS and NLSY. The TPOPS helped determine the CPI by collecting data about where consumers purchase goods and services and how much they are spending and inform about the nation's consumption habits.

Strengths. The TPOPS survey differs from the CES, though they both measure inflation, since the TPOPS survey focuses on *where* respondents bought items. The different options include online, mail order, or traditional "brick and mortar" store. According to the Census website, since the price differs in terms of where respondents' shop, it is another measure for determining the Consumer Price Index. Respondents are asked to participate for two years and interviewed every three months during that period.

Contrast to NLSY. The NLSY aims to track labor market outcomes over time, whereas the TPOPS simply aims to see where Americans spend their money on certain items and allow BLS to calculate the CPI. The NLSY includes extensive questions about educational and labor force participation, while the TPOPS surveys focus on where respondents purchase their items. As with the other surveys studied here, TPOPS also does not follow respondents across their lives like the NLSY.

TPOPS using random digit dialing to select respondents within their area, as opposed to the address-based sampling for the NLSY. In addition, as with the previous surveys the TPOPS is not focused on specific birth cohorts like the NLSY.

Used with NLSY. While the information on inflation rate is important for informing over-time comparisons from NLSY data, the direct uses of TPOPS with NLSY data are more limited.

Limitations

Comparing the NLSY to other longitudinal surveys is a task that could involve months of detailed research. Given the large volume of information and the number of questionnaires available, not all questionnaires were examined for a given survey; we focused on questionnaires more relevant to the age and respondent types for an NLSY26. In addition, as noted above, we were not able to examine all non-BLS longitudinal surveys but instead implemented a set of criteria to limit the surveys that were compared to the NLSY. Despite these potential limitations, we feel that the criteria identified the surveys and questionnaires most relevant to the development of the NLSY26.