

Health and household surveys in Brazil and England: The National Health Survey and the Health Survey for England

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Abstract *This paper aims to analyze the characteristics of national health surveys conducted in Brazil and England by their respective Statistics institutes. For Brazil, the National Health Survey (PNS) was considered, and the Health Survey for England (HSE) for England. To this end, we show a preliminary overview of the different population profiles of the two countries. Then, a brief historical background is presented, including the common themes that are addressed in the PNS and HSE that favor comparative analyses. Finally, we compared, for example, the inequalities in access to and use of Brazilian and English health services. The results show several possibilities for comparative analysis on topics such as health perception, tobacco use, alcohol consumption, diabetes, and hypertension. However, the need to consider the specificities of the population profile of each country and the methodological characteristics of the surveys is emphasized.*

Key words *Public health, Health surveys, Comparative study, Brazil, England*

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Introduction

National health surveys have been constant since at least the 1960s in high-income countries, and more recently, in middle and low-income countries. Such advances occurred in expanding the generation of information that supports the planning, monitoring, and evaluation of public health policies. These serve multiple purposes, including the survey of the population's health profile, distribution of risk factors, estimation of socio-environmental health conditions, evaluation of health systems, and estimation of inequalities in the analyzed population¹. With other information and administrative records, such studies are fundamental to knowing people's health conditions and development. However, their frequency is rarely annual, given the costs and complexity of these surveys.

In this context, Brazil carried out its first National Health Survey (PNS) in 2013, and the second in 2019. England, in turn, conducts annual surveys focused on the health of the population since the 1970s with surveys from the General Health Survey (GHS) (the survey was renamed the General Lifestyle Survey in 2008) and the Health Survey for England (HSE), which started in 1991. This paper aims to analyze the characteristics of national health surveys conducted in Brazil and England by their respective statistical institutes. The PNS conducted by IBGE will be considered for Brazil, and HSE for in England, coordinated jointly by NatCen Social Research and University College London. To this end, the leading health issues in the countries are first presented from aspects of demographic dynamics and morbimortality in both countries.

Then, based on this analysis, we comparatively considered the main characteristics of the PNS and HSE, indicating the topics covered and the respective possibilities of comparative analysis. Finally, we compared the selected indicators representing inequalities in access to and use of health services based on national household surveys.

Population and health: Brazil and England

Some socioeconomic and historical processes condition the different health situations between countries. For the case in question, demographic changes and current health trends stand out in the Brazil-England comparison.

In population terms, the demographic transition, given by changes from a regime in which

high mortality and birth rates prevail to one in which both rates are low, is considered one of the central phenomena of population change in modern society. This can be seen as a broad process, intrinsically interconnected with the modernization of society and urbanization^{2,3}.

In Brazil, this process occurred throughout the twentieth century, accelerating from the 1950s under rapid urbanization, which marked the change from a country until then fundamentally rural to primarily urban. In this context, mortality and fertility fell significantly. The total fertility rate (TFT) – comprising the mean number of children a woman will have throughout her reproductive life – declined rapidly from 6.2 in 1950 to 1.9 in 2010. The infant mortality rate (IMR), in turn, denotes the risk of dying before the first year of life, an essential indicator of socioeconomic development. IMR in Brazil fell from 135 to 16.2 per 1,000 live births from 1950 to 2020, while life expectancy at birth rose from 45.5 to 73.5 years. During the same period, the dependence ratio, that is, the quotient between the population defined as economically “dependent” (children under 15 years and those over 60 years) over the potentially productive age group (from 15 to 59 years) more than doubled, going from 8.0% at the beginning of the period and 16.6% at the end⁴. A swift transition was observed in the age structure, exerting pressure on the pension and health care systems. The latter starts to pay attention to the demands related to population aging, with services geared to preventing chronic diseases, for example⁵. However, it is worth mentioning that, given the country's territorial dimension and inter and intra-regional socioeconomic inequalities, the demographic transition occurs at different rates in each location, with more impoverished populations and regions showing relatively high levels of TFTs and mortality even in more recent years^{6,7}.

In England, on the other hand, the demographic transition usually begins in the late nineteenth century, with gradual mortality and fertility declining rates^{8,9}. Fertility estimates indicate that they went from approximately 6.0 children per woman during the 1870s to reach the replacement level as early as the 1930s¹⁰. The replacement level comprises the minimum threshold of 2.1 children per woman for a numerically stable population. From 1930 to 1970, TFTs in England fluctuated due to significant social and economic changes in the period, including WWII (1939-1945) and the recovery of the countries involved in the aftermath. The lowest levels

were seen during the war, with the TFT of 1.7 in 1941. In 1947, this indicator reached 2.7 children per woman and, in 1964, 2.9. Fertility has since dropped significantly, swinging from 1.6 to 1.9 during the 1980s and 2010s¹¹.

Mortality in the country also declined from the second half of the 19th century, so that life expectancy at birth, 41 years in 1841, increased to approximately 50 years at the beginning of the twentieth century and increased sharply in the first half of that century, reaching 71 years in the 1960s. Such advances occurred mainly due to the fall in infant and childhood mortality¹². In the second half of the twentieth century, with advances in medical treatments and health care for the adult and elderly population, a decline in the mortality rates of older age groups and increased longevity was observed, with life expectancy reaching 81 years in 2010¹².

The demographic changes in England are widely documented and discussed, having been pointed out as explanatory factors, for example, social changes impacting the fertility transition^{9,13} and health advances with their effects on declining infectious diseases in the twentieth century^{14,15}. Faced with distinct historical processes that, in turn, have impacts on population dynamics and, consequently, on health, the Brazilian and English age structures currently have significant differences, as shown in Figure 1.

While both countries are at an advanced stage of the fertility transition, their age structures clearly indicate the critical speed and time differences of the demographic transition, with the age distribution of England being older, with a significantly higher proportion of older adults and a smaller proportion of children than Brazil. Also, the distribution of age groups against the total is more equitable in the European country, while Brazil has a preponderance of population groups aged 10-29 years.

However, if during the 2000-2010 period the two countries showed gains in life expectancy (albeit more slowly compared to the recent past), the English case has shown a tendency to stagnation. Considering the United Kingdom as a whole, there was a reversal in the trend of falling mortality for the young and adult population (between 15 and 54 years old), and stability with a slight elevation¹⁶ for the population aged 90 and over. Even compared to other developed countries, England showed a slower evolution in life expectancy in the 2010s. Such a life expectancy plateau presents the age, gender, and social group differences, with causes related to fiscal

austerity policies that limit the quality of and access to health services in the country^{17,18}.

The current health situation in England has also been characterized by higher mortality among older adults (90 years and over) due to mental and behavioral illnesses¹⁶; the growing child poverty and the reversal of the fall in child mortality, especially in the poorest areas¹⁸; reduced rate of decrease in mortality rates specific to circulatory diseases¹²; increase in deaths caused by drug and alcohol overdoses and diseases related to alcohol abuse and suicide¹⁹; and the widening gap in life expectancy between the richest and the poorest²⁰.

In turn, Brazil has undergone an incomplete epidemiological transition throughout the twentieth century. The classic epidemiological transition proposed by Omran²¹ predicted the gradual change in the pattern of morbimortality from infectious and parasitic diseases to higher incidence and prevalence of chronic degenerative diseases and external causes. Analyzing the Brazilian case, Prata²² and Araújo²³ point to the growth of chronic-degenerative diseases, but with high levels of infectious and parasitic diseases (such as dengue and malaria) that, in theory, should have been overcome. There is also an increase in the importance of deaths related to external causes, especially in traffic accidents and homicides among young men^{24,25}.

Besides previous aspects, the economic crisis during the second decade of the twenty-first century is an aggravating factor in the country's recent morbimortality dynamics. In this context, in parallel with the rising unemployment rate is the corroded social rights and setbacks in policies to include the population in worse socioeconomic conditions and a progressive decline of resources allocated to public health²⁶.

Analyzing the 2012-2017 period, Hone et al.²⁷ concluded that, considering health spending and social protection programs, an increase in mortality due to increased unemployment was observed, mainly in causes related to neoplasms and cardiovascular diseases. Such an association was more significant in specific groups: in the black population, in the 30-59 years age groups, and among men. Also, no significant association between the economic recession and excess mortality was observed in municipalities with high social spending on health and social programs. Table 1 presents a comparative analysis of the sociodemographic and health landscape of both countries under analysis.

Among the indicators presented, noteworthy are the different geographic dimensions

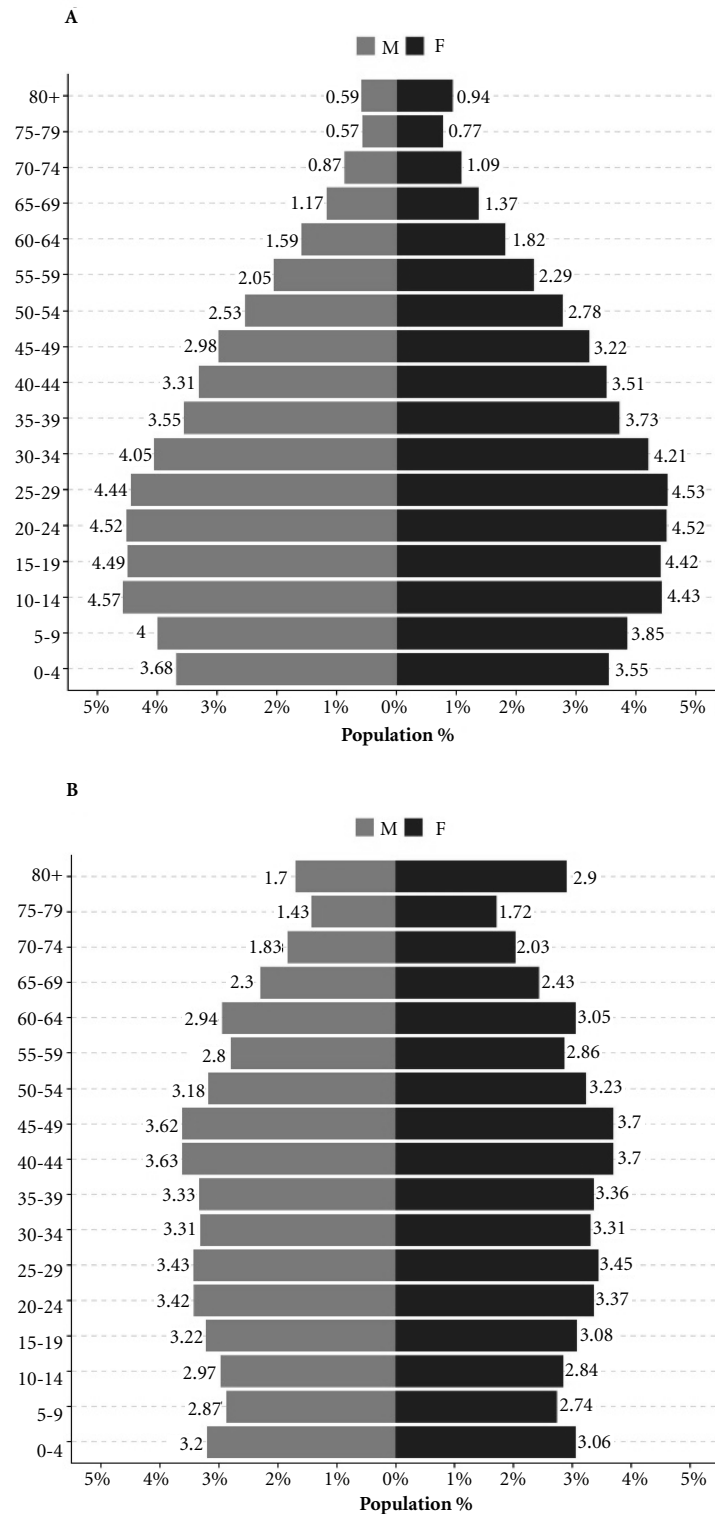


Figure 1. Age structure by gender and five-year age groups, Brazil (A) and England (B) – 2010 and 2011, respectively.

Sources: A: IBGE – 2010 Demographic Census. B: Population Census, Office for National Statistics, 2011.

Table 1. Sociodemographic and health indicators, Brazil and England, selected years.

Indicators	Brazil	England
Area, km ²	8,538,000	130,427
Total population	210,147,125 ^a	56,286,961 ^b
Gini Index, 2018 and 2016, respectively ^c	0.54	0.35 ^d
Income level ^e	Medium High	High ^d
GDP per capita, in US dollars ^e	8,717	42,330
Population under US\$ 1.90/day, %, 2018 and 2016, respectively, in US dollars ^f	4.4	0.2 ^d
Population living in urban areas, 2020, % ^g	87.1	83.9 ^d
Life expectancy at birth, years, men (2015-2020) ^h	71.90	79.37 ^d
Life expectancy at birth, years, women (2015-2020) ^h	79.27	82.90 ^d
Mortality rate of children under 5, per 1,000 live births, 2019 ⁱ	13.9	4.3 ^d
People with adequate sanitation, 2017, % ^j	97.8	49.3 ^d
Total Fertility Rate ^k	1.8	1.8
Schooling years ^k	7.9	12.9
Mortality rate, by selected causes, per 1,000 inhabitants, 2019^l		
Cardiovascular diseases	183.6	270.9
Neoplasms	122.8	283.8
Neurological problems	32.7	70.1
Respiratory infections and tuberculosis	43.5	62.3
Chronic respiratory diseases	35.3	74.7
Diabetes and kidney disease	49.7	20.2
HIV/AIDS and sexually transmitted diseases	7.4	0.5
Neglected diseases and malaria	4.2	0.0
Nutritional deficiencies	3.8	0.2
Self-mutilation and interpersonal violence	37.2	8.3

Sources and additional information: ^a 28, ^b 29, ^c 30, ^d United Kingdom data, ^e 31, ^f 32, ^g 33, ^h 34, ⁱ 35, ^j 36, ^k 37, ^l 38.

Meaning of the indicator: Percentage of people using adequate sanitation facilities, that is, facilities not shared with other families and in which excreta are safely discarded or transported and handled off-site.

of the countries because while Brazil has more than 8.5 million km², England has less than 131 thousand km². This fact alone has significant implications for the challenge of ensuring the feasibility of national public health systems that cover the entire population. Also, in the case of Brazil, the territorial extension and the isolation of part of the population in very remote locations, such as riverside communities and isolated indigenous populations in the Amazon³⁹, are additional challenges. Another challenge is the population volume since the Brazilian population is fourfold the number of inhabitants of that European country. On the other hand, as already mentioned, different historical and demographic processes culminate in the fact that the socio-economic indicators are much more favorable in England than in Brazil. The differences in these

indicators, in turn, reflect on the mortality dynamics in these countries. Thus, while England has higher mortality rates than Brazil for cardiovascular diseases, neoplasms, neurological problems, and respiratory diseases, the opposite occurs with diabetes and kidney diseases, HIV/AIDS, neglected diseases, nutritional deficiencies, and interpersonal violence, public health issues that are noticeably more acute in Brazil.

Brazil: National Health Survey (PNS)

In Brazil, public health statistics consist of a set of studies and surveys, including household and administrative records. From the viewpoint of the records, some of the fundamental ones in health are the vital statistics systems, such as the Mortality Information System (SIM) and the

Live Birth Information System (SINASC); statistics on diseases and conditions, with the Notifiable Diseases Information System (SINAN), and information on hospital admissions, with the Hospital Information System of the Unified Health System (SIH-SUS), which the Ministry of Health manages.

Health studies and surveys include the Medical-Sanitary Care Survey, which investigates public and private establishments across the country offering individual or collective health care, last published in 2009; the Estadics and Munics, carried out with the state and municipal governments with the collection of management information, including in health (last edition held in 2018); the National School Health Survey (PeNSE,) conducted in 2009, 2012, and 2015, to investigate risk factors and health protection for adolescents, and the National Health Survey (PNS), which will be analyzed here. However, it is worth mentioning that the country's health situation as a whole requires an analysis of the set of studies and is not the objective of this paper.

Historically, the PNS goes back to household surveys that portrayed the country's health system in the 1980s, when, in 1981 and 1986, the National Household Sample Survey (PNAD) included health supplements. The research was broader in its first application⁴⁰ and included collecting data via a questionnaire, the measurement of anthropometric measures, and the collection of blood and urine for laboratory analysis. The health supplement was only applied again in 1998, when it was incorporated in a regular period of five years, with research also carried out in 2003 and 2008.

The first PNS was conducted in 2013 in a joint initiative by the IBGE and the Ministry of Health to investigate the health conditions and lifestyles of the Brazilian population based on a household survey incorporated into the Integrated Home Surveys System (SIPD), with an expected quinquennial periodicity^{41,42}. In general, the PNS is characterized as a household survey that allows research on the population's health conditions, the assessment, use, and access of the national health system; and surveillance of diseases and health conditions and associated risk factors⁴³.

The PNS sample is made by a conglomerate in three selective stages and is a subsample of the SIPD Master Sample (which in turn is based on the 2010 Demographic Census). The Master Sample is given by a set of primary sampling units (UPAs), represented by census tracts or a set of

tracts (depending on the number of households in them). UPAs are stratified according to four criteria: administrative (UF, capital, remainder of the Metropolitan Region (RM), or Integrated Economic Development Region (RIDE), and remainder of the UF); geographic (a subdivision of capitals and larger municipalities into strata), situational (urban and rural), and statistical (strata are selected based on homogeneity, considering income and total households)^{43,44}.

UPAs are selected by simple random sampling (SRS) in the one-quarter sample of the Master Sample in the first stage. In the second, via the SRS, a fixed number of permanent private households is selected following the National Register of Addresses for Statistical Purposes (CNEFE). In the next step, in each household, a resident with at least 15 years of age is selected via SRS and responds to the individual questionnaire. Thus, data related to households are made from two selection stages and those of residents from three stages. Finally, the sample size calculation at the level of precision with a 95% confidence interval is done considering the various specific indicators of interest in the research and a non-response rate of 20%. Excluding vacant households, interviews were conducted in 60,202 households in 2013 and 94,114 households in 2019 (with a total loss rate of 13.2%)^{43,44}.

England: Health Survey for England (HSE)

Household health surveys in the U.K. are conducted periodically since the 1970s with the application of the General Household Survey (GHS). They include sample surveys and census surveys; in other words, they encompass the entire population. In the sample surveys, HSE started in 1991 with an annual frequency and is one of the primary sources of officially certified health statistics in England. It is carried out by the Health Surveys Unit of NatCen Social Research in partnership with the Research Department of Epidemiology and Public Health at the University College London⁴⁵.

The survey includes the annual collection of health and psychosocial indicators on the consumption of cigarettes and alcohol, the use of health services, medicines, and the collection of anthropometric measures on obesity and blood pressure. Also, specific supplements are made (which vary annually), covering specific regions, themes, or populations or ethnic groups. HSE is applied to private households, with information coverage for the adult population aged 16 or old-

er (until 1995) and the entire population (from 1996). It is representative for this population in the country as a whole and disaggregated for administrative regions⁴⁵.

In 2019, as previously, the respondent selection methodology followed stratified probabilistic sampling, and the sample's base was the postal address register. In that year, a random sample of primary sampling units (UPAs) was selected in postal code tracts in the first stage, generating 534 UPAs. Subsequently, 18 addresses were selected for each UPA, resulting in a total of 9,612 addresses (of which 90% contained private households).

All the visited households' residents were interviewed, considering a limit of up to 10 interviews for the population aged 16 or over, two interviews for those aged up to 12, and two interviews for groups aged 13-15. The collection of broader data on health conditions, with nurses' visits, was carried out in a random selection of 16 addresses in each UPA. Response rates per household were 60%, considering at least one eligible resident interviewed, and 47% for conducting interviews with all eligible residents. In all, in 2019, the sample consisted of 8,205 adults and 2,095 children under 15, with 4,947 adults and 1,169 children also being collected by nurses⁴⁵.

PNS and HSE: Comparative analysis of methodologies and selected indicators

PNS and HSE are fundamental to the health statistics systems in Brazil and England, respectively. However, the track record and implementation varied widely. In England, the survey has been providing annual data since 1991, while Brazil has conducted the PNS only since 2013 (or 1998, considering the PNAD Health supplement), and its most recent edition was 2019. On the other hand, in Brazil, sample size provides a spatial breakdown at the level of Federation Units and municipalities in the capitals, while the HSE is restricted to the level of the country and administrative regions. The comparison of the main methodological characteristics of the research is shown in Chart 1.

The comparison between the themes can be seen in Chart 2. In general, both PNS and HSE address the perception of health status, tobacco use, alcohol intake, fruit consumption, anthropometric measurements (height, weight, and waist circumference), arterial hypertension, high cholesterol, kidney problems, and breathing problems. Specifically in England, it is relevant

to note the presence of more recently included issues that have remained uninterrupted since then: health plans since 2009 and sexual orientation since 2011. Brazil also introduced a question about sexual orientation in the 2019 edition and kept questions covering important events but with relatively scarce data in the country, such as maternal health.

Therefore, there are several possibilities for comparative analysis between health topics in Brazil and England using the PNS and HSE. Both bring already consolidated trends in health conditions and allow analyzing the underlying social changes. Concerning more perennial characteristics, data for 2019 show, for example, that the proportion of women who attend medical visits is 78.3% in the European country and 82.3% in the Latin American, higher than men (57.3% and 69.4%, respectively), for visits in the 12 months before the interview. On the other hand, considering this indicator by socioeconomic status, the percentages are close in England: among those in worse socioeconomic conditions, 77.9% sought care in the period, while the same occurred for 75.0% of those with less social vulnerability. In Brazil, on the other hand, while 67.6% of the group with up to 25% of the minimum wage sought medical care, 89.6% of those with earnings above five minimum wages reported a medical visit in the same period. There is, therefore, a much more significant difference compared to the English case, pointing to the higher access to health services by the affluent population compared to the socially vulnerable in Brazil.

Regarding the reason for visiting the doctor, the questions differ concerning the possible answers and the period considered. In England, the main reasons declared for medical visits in the reference period were physical health problems (83.7%), mental, nervous, or emotional problems (5.2%), and both reasons (11.1%). In Brazil, the reference period considers the last two weeks, and the main reasons for medical visit were illness or its treatment (48.2%), vaccination, prevention, medical check-up, or follow-up with another health professional (25.1%), complementary diagnostic test (10.2%), dental visit (6.3%), and accident, injury, or fracture (4.6%).

The difference in income between groups (following the previous classification) was also significant for other dimensions in both countries. In Brazil, 30.8% of the population aged 18 or over in the lowest income group was classified as insufficiently active and, in the highest income group, 48.0% of the population. In England, the

Chart 1. Methodological comparison between the surveys: PNS and HSE.

	PNS ^a	HSE ^b
Years	2013/2019 (2 editions)	1991-2019 (29 editions)
Age range	All	All (since 1996)
Respondents	Residents > 15 years randomly chosen from those eligible at home	Residents > 16 years randomly chosen from those eligible at home
Sampling plan	Three-stage conglomerate sampling: census tracts or set of sectors; households; and respondents aged 15 or over (third stage). Total: about 290,000 people in 80,000 households	Three-stage conglomerate sampling: postal areas; households; and respondents aged 16 or over (third stage). Total: About 10,000 people in 4,000 households
Excluded from the sample	Populations of indigenous and institutionalized villages (in barracks, military bases, accommodation, camps, boats, penitentiaries, penal colonies, prisons, jails, asylums, orphanages, convents, and hospitals)	Institutionalized (non-private households)
Geographical disaggregation level	Brazil → Great Regions → Federative Units → Capitals of Federal Units	England → Administrative regions

Sources: ^a 43, ^b 45.

percentages were 31.7% for those in more affluent areas and 49.6% for those living in more deprived areas (data for 2016, latest edition of the survey measuring the dimension). In Brazil, income differentials also affect self-assessed good or very good health, which reaches 55.5% for the poorest and 86.4% for the richest. In England, in turn, data on self-assessed health in 2019 are not available by level of deprivation, and 74.6% of the population had a good and very good self-assessment of health.

Therefore, while some questions can be easily compared between Brazil and England using the PNS and HSE, others are designed to highlight the main health problems of each country. Thus, comparative analyses are feasible and desirable. However, any topic to be investigated requires an in-depth study of the specificities of the two countries' research, contexts, and socioeconomic pathways concerning the selected study object.

Final considerations

The structuring of health information systems is fundamental for monitoring the living conditions and well-being of the population. Such systems include multiple surveys and records, with a sampling and census nature. In the case of En-

gland, the Demographic Census raises questions about general health conditions and Brazil about disabilities. While the Demographic Censuses in both countries occur every ten years, the frequency of sample surveys aimed at understanding the health of the population varies enormously in Brazil and England, as evidenced in the case of the PNS and HSE presented in this paper. Such difference in periodicity, however, does not preclude comparisons between countries. The set of common themes investigated in recent years in both surveys opens up a range of multiple investigative possibilities for thinking about similarities and differences between the Latin American and European contexts.

In Brazil, the analysis of the PNS 2013 allowed, for example, to show differences in the use of health services by patients with chronic diseases, income levels, and private health plans⁴⁷. In England, the HSE allowed inferring that an increase was observed in the prevalence of self-reported poor health conditions, clinical diagnoses of diabetes, and overweight in the younger cohorts from the 1990s, with growth in the years lived with morbidities, and gains in healthy life expectancy were lower compared to those of life expectancy⁴⁸. The use of HSE also illustrates the importance of pairing data in health research, which would be a potential for the PNS. In this

Chart 2. Common themes in at least one edition of the PNS and HSE.

Theme/	PNS ^a		HSE ^b																										
	2013	2019	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Year	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Household information	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Individual information	P	P								P																			
Social benefits	P	P																		P	P	P	P	P	P	P	P	P	P
Occupation	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Perceived health condition	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Tobacco use	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Alcohol consumption	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Fruit consumption	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Height	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Weight	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Blood pressure	P		P	P			P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Waist circumference	P	P					P	P		P		P	P	P				P				P					P		
Physical activity	P	P			P	P	P		P	P	P	P																	
Accidents	P	P	P	P				P	P	P			P	P	P	P			P	P	P	P	P	P	P	P	P	P	P
Diabetes	P	P			P	P	P	P		P	P			P															P
Asthma	P	P		P				P	P	P			P	P	P	P			P	P	P	P	P	P	P	P	P	P	P
Arterial hypertension	P	P						P	P	P			P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P
Cholesterol	P	P																	P	P									
Kidney problems	P	P										P																	
Maternal health	P	P	P	P				P		P																			
Respiratory problems	P	P							P	P	P	P			P					P	P								P
Oral health	P	P																	P	P	P	P		P	P	P		P	
Health Insurance plan	P	P	P	P	P		P	P	P		P	P	P	P	P	P				P									
Contraception	P	P																											P
Mental health	P	P																				P		P	P	P			
Hormone replacement	P	P						P	P		P	P	P	P	P	P													
Sexual activity		P																		P		P							
Sexual orientation		P																			P	P	P	P	P	P	P	P	P
Vaccination	P	P									P	P	P	P	P	P	P	P											
Medication use	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Hearing impairment		P																						P					

Sources and additional information: ^a41, 42, 43, ^b46.

The history of topics addressed in the HSE in 1991 and 1992 was not found.

case, HSE's data is paired with information from mortality and cancer records, enabling longitudinal and cohort analyses based on a cross-sectional survey⁴⁹.

It is worth remembering that comparisons between health conditions in Brazil and England are not random. Quite the contrary: both countries have very robust, free, and universal health care systems; that is, covering virtually all members of their respective societies. However, despite the particularities of the English National Health Service (NHS) and the Brazilian Unified Health System (SUS), both share the context of increasingly acute financing crises, which affect the quality of the service offered to the population and

hinder access, especially for the most vulnerable social segments of the population, which historically already have the worst health indicators.

The PNS and HSE show excellent opportunities to assess the dynamics of the morbimortality profile of Brazilian and English populations, both separately and in comparative studies. This monitoring is fundamental to shed light on the social determinants of health in both countries, allowing the in-depth analysis of scientific knowledge and the elaboration of public policies focused on the most vulnerable population segments. Thus, progress is being made towards ensuring equitable access to health and the gradual construction of inclusive social development.

Collaborations

All authors worked equally on the paper's design, writing, and data analysis.

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