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Is it unfair for the affluent to be able to purchase “better” healthcare? Existential standards and institutional norms in healthcare attitudes across 28 countries

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ABSTRACT

Existing research has found that individuals often perceive healthcare inequalities as unfair; yet, there is high variation in unfairness perceptions between countries. This raises the question of whether the institutional context of the healthcare system is associated with what people perceive as unfair. Using data from the ISSP study and OECD health expenditure data from 2011/13, we explore whether individual attitudes about the unfairness of healthcare inequality – the ability to purchase “better” healthcare for the affluent – vary systematically with a country's institutional environment: namely, with the prevalence of cost barriers to healthcare access, and with the degree and type of public healthcare financing. Three general findings emerge from the analysis: (1) Higher cost barriers correlate with lower levels of perceived unfairness in healthcare inequality, suggesting those exposed to greater levels of inequality tend to be more accepting of inequality. This finding is consistent with empirical justice theory and the expected relevance of an ‘existential’ standard of justice, stemming from individuals' proclivities to accept the status quo as just. (2) Further, greater public financing of healthcare correlates with higher perceived unfairness. Drawing on neo-institutionalist theory, this may suggest that greater public financing enshrines access to healthcare as a universal right, and hence provides an ideational framing that delegitimizes unequal opportunities for purchasing better healthcare. (3) Further, higher unfairness perceptions of lower income and educational groups are more strongly associated with greater public financing than those of their respective comparison groups. This may indicate that the normative right to healthcare is of particular importance to the disadvantaged, which could potentially explain the political quiescence on healthcare of lower income and educated persons in societies that lack universal health systems. In sum, this study contributes to the larger debate on the interrelatedness of healthcare institutions and public opinion, and specifically on perceptions of unfairness.

1. Introduction

Existing research shows that the public views the sick as highly deserving of care (van Oorschot, 2006, 2010; Jensen and Petersen, 2017), and that inequalities in accessing healthcare services are largely perceived as unfair (von dem Knesebeck et al., 2016). Yet, variation remains in the degree to which persons residing in different countries consider healthcare inequalities to be unfair. These differences in public opinion are very important for health politics and for public policy making in the health field. If individuals do not find healthcare inequality to be unfair, there will be little public support for national measures to improve universal access to healthcare or for international initiatives to coordinate health policies to meet a universal standard.

Furthermore, this variation raises the possibility that perhaps healthcare systems themselves set public expectations about a right to universal healthcare and the unfairness of healthcare inequality. Given current debates about path-dependency and policy feedback, healthcare systems may structure and legitimate inequality through their impact on access to healthcare services, and the ways in which they support or disrupt attribution of responsibility for healthcare outcomes. If so, healthcare institutions may play a key role in legitimating the outcomes they produce.

In this article, we investigate whether the public's opinion concerning the unfairness of healthcare inequality varies systematically with the country's institutional environment. As neo-institutionalist theory suggests that institutions influence people's normative attitudes

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towards universal healthcare rights, we focus on whether people find it unfair that those with higher incomes can afford to pay more for “better” healthcare. If people believe that there is a universal right to healthcare, they should object to the cumulative advantage of the more affluent, and be more likely to find it unfair that people privileged by their position in the income distribution can use these resources to purchase “better” healthcare. Specifically, we investigate the relationship between two contextual factors and individuals' judgements about the unfairness of unequal healthcare. The first aim of this study is to explore whether the prevalence of cost barriers to accessing healthcare is associated with opinions about the unfairness of healthcare inequality. Drawing on empirical justice theory, we expect cost barriers to serve as an ‘existential’ standard of justice that forms people's expectations on what is fair and unfair. We expect to find a positive association between unfairness perceptions and cost barriers to healthcare, stemming from individuals' proclivities to accept the status quo as just. Second, this study aims to examine the relationship between healthcare financing structures and opinions about unfairness in healthcare inequalities. According to neo-institutionalist theory, norms on the equal right to healthcare may be embodied in the institutional structure of healthcare financing. Following this line of theory, public financing structures may send a message that access to healthcare is a universal right. Consequently, we expect a positive association between greater public financing and unfairness perceptions, as public financing structures may enshrine access to healthcare as a universal right, and hence provide an ideal framing that puts unequal opportunities of purchasing better healthcare in a more negative light. A third aim of this study is to examine whether the institutional context, specifically public healthcare financing, is associated with unfairness perceptions of some groups more than others. Following up on the health rights hypothesis, we expect to find public healthcare financing to be more strongly associated with unfairness perceptions of groups with low income and education. This may provide an explanation for the political quiescence on healthcare – specifically of lower income and educated persons – in societies that lack universal health systems.

Overall, this article contributes to our understanding of the relationship of healthcare institutions and public attitudes, and their potential political consequences. We test our hypotheses using data from the ISSP study and OECD health expenditure data from 2011/13, applying multi-level modeling techniques. Our findings provide insights on the degree to which the public accepts inequality in healthcare, and their systematic variation across countries and their institutional environment. Although our results only provide a limited snapshot of the relationship between healthcare institutions and unfairness perceptions at one point in time, they certainly contribute to the larger discussion on the interrelatedness between healthcare systems and public opinion, specifically normative judgments on the equal right to healthcare.

2. Theoretical background

2.1. Healthcare financing

Financing is a critical dimension of healthcare systems. The proportion of public financing has been viewed as a key lever for governments to control health costs and allocate resources, as well as to provide universal access to healthcare (Anderson et al., 2003; Evans, 1983, 1986; Immergut, 1992; Marmor and Wendt, 2012; Reinhardt and Madison, 1989; Wendt, 2009). Indeed, the percentage of public financing correlates with lower overall health expenditures (Béland and Gran, 2008; Wendt, 2015); greater redistribution of healthcare costs (Huber et al., 2008; Wendt, 2015); and better self-rated health and less health inequality (Olafsdottir et al., 2014). Private payment, on the other hand, and specifically individual out-of-pocket payment not covered by insurance, such as deductibles and co-payments, comprises a cost barrier to healthcare access (OECD et al., 2017), and has been identified as a cause of financial insecurity and lack of confidence in the

health system (Lange et al., 2012; Wendt et al., 2012). For this reason, the European Commission has introduced both out-of-pocket payments and the subjective degree of unmet need as indicators for monitoring progress in implementing Europeans' right to “timely access to affordable, preventive and curative healthcare of good quality,” the 16th key principle of the European Pillar of Social Rights (European Commission et al., 2017). Similarly, the WHO considers “timely, acceptable, and affordable health care” as critical for ensuring “the highest attainable standard of health as a fundamental right of every human being” (WHO, 1948, 2017).

Healthcare financing is more complex than the public-private divide, however. Public payments include taxes and social insurance contributions and reimbursements, while private payments include voluntary healthcare payments (such as voluntary health insurance, financing by non-profit institutions, and enterprise financing) and out-of-pocket payments (OECD et al., 2017). In single-payer National Health Service (NHS) type systems—sometimes referred to as “Beveridge” systems—public financing stems predominantly from taxation. In social health insurance (SHI), multi-payer systems (often-called “Bismarck” systems) compulsory contributory insurance dominates. Similarly, the impact of private payment will be considerably different dependent upon whether it is comprised mainly of private insurance coverage or individual out-of-pocket payments. Furthermore, the functioning of a healthcare system and the provision of care will be affected by many other factors such as government regulation, the degree of centralization or decentralization, the focus on preventative, primary or specialist care, and whether healthcare provision itself—including the ownership of healthcare facilities—is public, private or non-profit (Hollingsworth et al., 1990; Pavolini and Guillén, 2013; Reibling, 2010; Reibling and Wendt, 2012). Nevertheless, public financing is central for government control of the health system, and thus a key element of healthcare governance. Further, private health provision and private health insurance appear in healthcare financing data categories, such that financing does provide valuable and easily accessible information about provision. In sum, a focus on financing provides us with a simple but useful variable for characterizing a key dimension of health governance that is available on an annual basis for a very broad array of countries (OECD et al., 2017).

2.2. Healthcare institutions and beliefs about the right to healthcare

Previous research has shown that institutions of healthcare financing are associated with normative attitudes. Persons in more publicly financed healthcare systems believe more strongly that it is the government's responsibility to guarantee adequate healthcare for the sick, they support higher levels of public financing for healthcare, and express higher levels of generalized trust (Cammatt et al., 2015; Jordan, 2010; Kikuzawa et al., 2008; Vilhjalmsson, 2016; Wendt et al., 2010). We posit that these differences stem from two distinct effects of healthcare financing institutions and the norm that healthcare is a right. Given that public financing aims to reduce cost barriers to healthcare access, greater private financing implies higher cost barriers to access, and hence greater inequality of access to healthcare between households with different financing means. In turn, this environment of greater structural inequality should be associated with individuals' opinions about whether people have a right to healthcare independent of their own economic resources, and thus whether unequal healthcare between different income groups is perceived as unfair. Second, we argue that programs of universal public healthcare financing embody a normative right to healthcare, such that individual persons in countries with such programs will regard access to healthcare as a right, as well. Consequently, these persons should regard inequalities in healthcare to be unfair. We will develop this argument first by reviewing the theoretical literature that is the basis for these claims, and second, by testing these propositions with empirical data.

2.3. Existential standards and the right to healthcare

In order to theorize about the expected association between structural barriers to healthcare access and whether individuals view healthcare as a universal and equal right, we turn to a body of research known as empirical justice theory. Here, previous research on distributive justice has demonstrated that the positioning of individuals within social hierarchies has been found to be highly relevant for individuals' judgements about distributive justice (Greenberg and Cohen, 1982). Socially disadvantaged groups tend to hold more egalitarian views, and to rate economic inequalities as more unfair (Castillo, 2011; Schneider and Castillo, 2015). However, at the same time that individuals may strive to justify their individual placement within a social hierarchy, they are also aware of system characteristics of that larger hierarchy. Indeed, a number of justice theories stress the role of social context in developing expectations about what is just. Context-dependent views on experiential justice (Konow, 2001) argue that individuals' experience of their societal environment forges existentially-based expectations (Shepelak and Alwin, 1986) of what we can achieve, and this in turn shapes evaluations of what is fair. As George Homans put it in a nutshell, "What is, is always becoming what ought to be" (Homans, 1976, 244). One mechanism for the acceptance of existential standards has been proposed by system justification theory, which posits that individuals share a "general ideological motive to justify the existing social order" (Jost et al., 2004, 881). Consequently, even those disadvantaged by the status quo tend to accept it as fair. A second possible mechanism is that in an unequal environment, individuals lower their expectations for equal outcomes, becoming fatalistic, and thus resign themselves to accepting inequality (Gurr, 1970). While our research design does not allow us to test these mechanisms competitively, we can test the relationship between cost barriers to healthcare access and public opinion on the unfairness of buying better healthcare. We expect the societal status quo to set an existential standard of justice that weakens the norm of healthcare rights, thus legitimating inequalities in healthcare:

H1. *The higher the cost barriers to healthcare access, the less that the respondents perceive unequal healthcare as being unfair.*

2.4. Institutional norms and the right to healthcare

According to neo-institutionalist theory, institutions do not just redistribute, they also endow meaning (Immergut, 1998). Thus, healthcare institutions may also be critical for conveying normative values, and hence legitimacy. Indeed, this is at the heart of welfare state regime theory, more generally. Welfare state regimes set out specific rights and duties that define the terms of welfare provision. Once established, social rights can be defended, and thus constitute an ideational resource that can help to mobilize citizens to demand further improvements or to fight attempted cutbacks. Critically, rights are not charity (Esping-Andersen and Korpi, 1984; Immergut, 2010, 229; Marshall, 1963; Pierson, 1993; Rothstein, 1998). This is the key conceptual difference between deservingness theory and neo-institutionalist policy feedback theories. According to deservingness theory, public attitudes towards beneficiaries of government programs depend upon respondents' perceptions of the individual responsibility of potential recipients for their plight, and on whether these persons are viewed as being socially distant from respondents (van Oorschot, 2006, 2010). When it comes to healthcare, respondents generally view the sick as highly deserving—unless they voluntarily damage their health through their behavior (Jaeger, 2006, 2007; Jensen and Petersen, 2017). In contrast to deservingness theory, however, neo-institutionalist policy feedback scholarship (Kumlin and Stadelmann-Steffen, 2014; Larsen, 2008; Svallfors, 2012) argues that it is precisely institutional arrangements that produce different conceptual categories for labelling beneficiaries as "deserving" or "undeserving." More specifically, the more universal

the welfare system, the more beneficiaries are viewed as belonging to a common risk community, and as such are defined as *more* than deserving, because they have a *right* to these benefits. Welfare regimes have been shown to be significant for explaining variance in attitudes about unfairness in healthcare (von dem Knesebeck et al., 2016). However, as welfare state regime theory excludes healthcare institutions (Bambra, 2006a, b), we will proceed to test this relationship more directly. We expect publicly financed healthcare to provide institutional legitimacy for the norm of universal and equal healthcare, and thus to delegitimize the purchase of superior healthcare:

H2. *The greater the level of public financing for healthcare, the more that unequal healthcare is perceived as unfair.*

2.5. NHS versus SHI healthcare systems

Scholars have made conflicting claims about the institutional norms embodied in single-payer, tax-based NHS systems versus SHI multi-payer contribution-based public healthcare systems. Some argue that the NHS type of system fosters greater universalism in health attitudes as healthcare coverage is a right of citizenship and no payment (or only marginal payment) is required at the time of treatment (Titmuss, 1968, cf. Kikuzawa et al., 2008). By contrast, other scholars view multi-payer contribution-based SHI systems as embodying a norm of reciprocity, which might also foster a strong entitlement to healthcare as contributors earn the right to treatment (Arts and Gelissen, 2001; Mau, 2004; Wendt et al., 2010).

On the other hand, we can imagine barriers to solidarity in each system. In SHI systems, contributors are generally divided into separate insurance schemes for different occupational groups, which might encourage acceptance of unequal healthcare based on contributory justice. In NHS systems, rationing mechanisms to control costs provide incentives for opting out of the public system (or at least supplementing it with private insurance). Consequently, it might be that norms of healthcare equality are weaker in single-payer systems as people opt out, while contribution-based systems might embody a stronger norm of universal coverage and a right to healthcare since everyone contributes according to their financial means. Consequently, we investigate two competing hypotheses about whether tax-financed or contribution-based health systems are more conducive to a norm of equalitarian healthcare:

H3a. *The greater the level of tax financing for healthcare, the more that unequal healthcare is perceived as unfair.*

Or:

H3b. *The greater the level of compulsory contributory financing for healthcare, the more that unequal healthcare is perceived as unfair.*

2.6. Socio-economic dynamics and the right to healthcare

An institutional right to healthcare should be most important for the socially disadvantaged as they may not be able to pay for adequate healthcare out of their own pocket. This disadvantage should also influence their attitude towards inequalities in healthcare. Indeed, we know from prior studies that an individual's socio-economic position is a significant predictor of welfare state attitudes at the individual-level. Persons with greater health needs, lower incomes, and other social disadvantages tend to report higher levels of support for social provision than the socially advantaged (Andreß and Heien, 2001; Blekesaune and Quadagno, 2003, 416–417; Svallfors, 1997). Socio-economic indicators and self-assessed health status are equally significant for beliefs about unfairness in healthcare (von dem Knesebeck et al., 2016). What remains unclear is whether the institutional norms embodied by the healthcare system are differentially associated with the unfairness perceptions of various socio-economic groups. For example,

environments that foster norms of universal and equal rights to healthcare may be particularly beneficial for the disadvantaged and encourage them to stand up for their rights. Consequently, we expect the effects of individuals and their institutional environment to interact. In a more publicly financed healthcare system, the perception of equal rights to healthcare should be stronger, and hence be of particular relevance for the attitudes of lower income and educational groups. Thus, we propose a “health rights” hypothesis:

H4. *The greater the level of public financing for healthcare, the more that lower income and educational groups perceive unequal healthcare as unfair.*

In sum, we test four hypotheses stemming from current theory. First, at the contextual level, individuals are thought to incorporate the societal status quo into their fairness perceptions, and to accept the status quo either as fair or as inevitable (H1, existential standards hypothesis). Second, at the level of collective principles of legitimation, individuals orient their fairness perceptions to the normative principles embodied in healthcare financing arrangements (H2, H3a/b, institutional norm hypotheses). Third, these institutional norms are an important political resource, such that greater rights to health result in stronger public support for public programs by those that need them most (H4, health rights hypothesis). In the following, we will test our empirical hypotheses with cross-country comparative survey data, and will report on whether there is indeed an association between these institutional features and unfairness perceptions. Please note, however, that the empirical analysis is based on cross-sectional data. Therefore, any assumptions on the causal relationship between healthcare institutions and unfairness perceptions remain speculative and will require the inclusion of relevant indicators in longitudinal, cross-comparative survey studies.

3. Data and methods

3.1. Data source

The empirical analysis is based on data of the module “Health and Healthcare” of the International Social Survey Programme from 2011/2013 (ISSP, 2015). The dataset provides cross-comparative information on the public’s opinion of healthcare services, self-reported health, and health insurance status as well as demographic and socio-economic characteristics for 55,081 individuals living in 32 countries worldwide. The sampling procedures and mode of data collection varied between countries. Respondents were selected following either a simple or multi-stage stratified random sampling. Data were either collected via face-to-face interviews, paper and pencil and postal survey, or web survey. Response rates vary between 23.0% in Italy and 85.9% in South Africa. For the present analysis, we selected countries for which valid and reliable information on all variables of interest was available. Ultimately, our final sample includes 46,047 individuals of 28 countries, namely from Australia (AU), Belgium (BE), Chile (CL), China (CN), Czech Republic (CZ), Denmark (DK), Finland (FI), France (FR), Germany (DE), Israel (IL), Italy (IT), Japan (JP), South Korea (KR), Lithuania (LT), Netherlands (NL), Norway (NO), Poland (PL), Portugal (PT), Russia (RU), Slovak Republic (SK), Slovenia (SI), South Africa (ZA), Spain (ES), Sweden (SE), Switzerland (CH), Turkey (TR), Great Britain (GB), United States (US) (see Table 1).

3.2. Measures – individual level

Outcome Variable. The perceived unfairness of healthcare inequality is measured by the question “Is it fair or unfair that people with higher incomes can afford better healthcare than people with lower incomes?” Respondents rated the perceived unfairness on a 5-point scale ranging from 1, very fair, 2, somewhat fair, 3, neither fair nor unfair, 4, somewhat unfair, to 5, very unfair, i.e. the higher the value of the dependent variable, the higher the perceived unfairness of healthcare

inequalities in the country. It is noteworthy that this question is not an evaluation of the present state of healthcare inequalities in the respective country, but a purely normative judgment on whether the purchasing of “better” healthcare is considered fair or unfair. This implies that better healthcare is a positional good, and not defined by an absolute minimum health safety net. It is thus a good indicator for measuring perceptions towards an equalitarian right to healthcare, as opposed to a minimum, charity standard. Information on the response behavior towards the unfairness of healthcare inequalities within countries is provided in Table S1 of the supplementary material.

To control for the influence of demographic and socioeconomic characteristics of the respondent, we include measures on the respondent’s gender (male/female), age (< 40, 40–60, + 60 years of age) and place of living (‘urban’: respondents living in a big city, in the suburbs or outskirts, or a town or small city; ‘rural’: respondents living in a country village, a farm or home in the countryside). Further, we distinguish between three educational groups based on the International Standard Classification of Education (ISCED): ‘lower educated’ respondents include those with no formal education, primary school or lower secondary school education; ‘medium education’ refers to respondents with upper secondary, post-secondary but non-tertiary education; ‘higher educated’ respondents completed a lower or upper level tertiary education (including diploma from technical schools). To study differences between income groups, we refer to income terciles based on the equivalent household disposable income adjusted for the household size. The respondent received a weight of 1; each additional household member was given a weight of 0.5. The health status of the respondent was measured by two variables: (i) the respondent’s self-reported health (fair/poor, good, and very good/excellent), and (ii) whether the respondent reported a long-standing illness, chronic condition, or disability (yes/no). Further, we control for health insurance coverage. Respondents were asked whether they feel well or very well covered by their health insurance or not well covered. This question was only asked, if respondents reported having health insurance. We regarded respondents without healthcare insurance living in a national healthcare system, such as Great Britain and Denmark, to be well covered by the health system and recoded missing information accordingly. We also included a variable on whether respondents had forgone medical treatment due to costs (“could not pay for it”) (yes/no), or whether they did not need any medical treatment. Additionally, we created two dummy variables to include individuals without information on household income and health insurance coverage. Table 2 provides the descriptive statistics for all variables located at the micro level.

3.3. Measures – country level

Existential Standards: In contrast to studies that measure cost barriers directly with variables such as the size of deductibles and co-payments (Wendt et al., 2010) or private supplemental insurance to combat these barriers (Lange et al., 2012), we use the aggregation of a subjective indicator, as we are investigating the normative logic that connects institutions to public attitudes. In addition, as a practical matter, specific measures of objective cost barriers are not available for the large number of countries included in our sample. Therefore, we decided to measure cost barriers to healthcare access as the share of population in the country that reported forgoing medical care due to costs compared to the overall population that needed medical care. This measure is an aggregation of the above stated individual level variable on unmet needs due to costs asked in the ISSP study. Of course, cost is not the only barrier to healthcare access; waiting times, distance, ability to take time off from work and other indicators of accessibility and acceptability are surely important as well (Israel, 2016; Lange et al., 2012). We have conducted a robustness check with these variables, and have found similar results. Nevertheless, we focus here on cost, as it is the barrier most directly related to the financing structure of the

Table 1
Country level characteristics: N, means, proportions.

Country	Response Rate	N (total)	N (study)	DV – Unfairness (%)	DV – Unfairness (Mean)	DV – Unfairness (SD)	Unmet need due to costs (%)	PHE (% THE)	Compl. contr. insurance (%PHE)	Government schemes (%PHE)	THE (per capita, ppp, US\$)
AU	31.1	1946	1727	50.67	3.37	1.36	7.13	67.54	0.00	100.00	3807.68
BE	35.8	3083	2777	76.09	4.10	1.09	8.36	77.24	86.11	13.89	4158.29
CH	53.9	1212	1192	66.95	3.79	1.06	1.40	63.07	64.39	35.61	6047.65
CL	83.3	1559	1509	58.38	3.63	1.43	13.00	59.46	95.48	4.52	1375.80
CN	72.1	5620	5286	43.61	3.14	1.18	13.74	55.89	67.00	33.00	515.14
CZ	57.9	1804	1687	71.01	4.00	1.10	1.62	83.74	94.59	5.41	2041.57
DE	36.5	1681	1578	77.69	4.07	0.94	3.89	83.13	92.01	7.99	4707.12
DK	56.1	1388	1348	61.50	3.75	1.30	5.62	84.33	0.00	100.00	4771.91
ES	67.8	2702	2592	73.77	4.04	1.10	2.11	72.21	6.54	93.46	2902.14
FI	53.7	1340	1258	45.63	3.07	1.54	6.68	74.80	18.58	81.42	3640.72
FR	35.9	3319	3058	81.23	4.25	1.02	6.08	78.11	94.94	5.06	4030.88
GB	53.9	936	806	45.66	3.29	1.26	3.73	82.58	0.00	100.00	3083.70
IL	66.7	1220	1128	70.48	3.94	1.14	6.98	62.71	74.12	25.88	2138.77
IT	23.0	1186	881	80.48	4.30	1.14	4.25	76.13	0.37	99.63	3245.42
JP	73.9	1306	1213	61.50	3.76	1.11	2.18	83.74	89.49	10.51	3798.06
KR	61.4	1535	1529	47.02	3.31	1.13	5.08	57.31	81.74	18.26	2048.10
LT	35.8	1187	1122	47.86	3.16	1.59	6.33	70.99	86.37	13.63	1484.72
NL	33.7	1472	1188	79.97	4.26	0.98	1.81	82.19	94.30	5.70	4846.44
NO	48.5	1834	1685	72.05	4.01	1.14	2.79	84.75	13.12	86.88	5736.77
PL	42.6	1115	1079	73.40	3.89	1.13	9.16	70.66	85.89	14.11	1575.97
PT	58.6	1022	997	74.52	3.79	1.02	6.67	65.57	1.77	98.23	2473.00
RU	48.2	1511	1430	67.97	3.92	1.18	15.68	62.65	50.06	49.94	1162.39
SE	59.8	1158	1049	76.26	4.17	1.05	2.28	83.97	0.00	100.00	4672.59
SI	64.7	1082	1053	84.24	4.46	0.98	1.12	73.32	95.46	4.55	2459.96
SK	47.1	1128	1114	71.90	3.96	1.07	3.55	72.17	90.59	9.41	2034.22
TR	44.4	1559	1430	63.50	3.61	1.09	28.02	79.17	73.05	26.95	916.77
US	78.2	1550	1488	56.12	3.52	1.35	11.17	48.38	47.87	52.13	8414.70
ZA	85.9	3004	2843	37.74	2.90	1.54	9.98	47.99	1.86	98.14	1055.09

Note: Table reports response rates, number of observations (total; study), mean values, standard deviations (SD), and % of unfairness perceptions (respondents perceiving inequalities in healthcare as somewhat unfair or very unfair), and structural barriers in healthcare access (% of unmet need of healthcare due to costs of those in need for healthcare) from the International Social Survey Programme (ISSP), module “Health and Healthcare”, 2011/2013; Source of variables on monetary input: OECD database (<http://stats.oecd.org/>, accessed 23 March 2018); PHE (% THE) = Public health expenditure as percentage of total health expenditure; Government schemes (% PHE): Expenditure of government schemes as percentage of public health expenditure; Compulsory contributory insurance schemes (% PHE): expenditure of compulsory contributory insurance schemes as percentage of public health expenditure; THE (per capita, ppp, US\$) = total health expenditure measures as per capital, ppp, current prices, US\$.

Table 2
Individual level characteristics (means/proportions).

	Mean, %
Perceived Unfairness of Inequalities in Healthcare	3.71
Female (0 = male)	.55
Age Groups (1 = < 40 years, 0 = others)	.34
Age Groups (1 = 40–60 years, 0 = others)	.40
Age Groups (1 = > 60 years, 0 = others)	.26
Place of living (1 = rural, 0 = urban)	.66
Self-rated Health (1 = excellent/v. good, 0 = others)	.32
Self-rated Health (1 = good, 0 = others)	.39
Self-rated Health (1 = fair/poor, 0 = others)	.29
Chronic health condition (1 = yes, 0 = no)	.32
Education (1 = low, 0 = others)	.39
Education (1 = medium, 0 = others)	.35
Education (1 = high, 0 = others)	.26
Equivalent HH-Income (1 = 1st tercile, 0 = others)	.27
Equivalent HH-Income (1 = 2nd tercile, 0 = others)	.26
Equivalent HH-Income (1 = 3rd tercile, 0 = others)	.25
Equivalent HH-Income (1 = no information, 0 = others)	.21
Unmet need for medical care due to costs (1 = yes; 1 = others)	.08
Unmet need for medical care due to costs (1 = no; 0 = others)	.66
No need for medical care (1 = yes; 1 = others)	.27
Insurance cover (1 = well/very well covered, 0 = others)	.72
Insurance cover (1 = not well covered, 0 = others)	.19
Insurance cover (1 = no information, 0 = others)	.10

Note: International Social Survey Programme (ISSP), Module “Health and Healthcare” from 2011/13; sample size individuals: N = 46,047, countries: N = 28.

healthcare system. This measure also allows us to compare the effects of personal unmet need reported by the respondent and its societal value (in the aggregated form) on unfairness perceptions. Due to the logarithmic relationship between cost barriers and perceived unfairness, the logarithmic form was used (see [Figure S1 in the Supplementary Material](#)).

Institutional Characteristics: Information on healthcare financing was collected from the OECD health expenditure and financing database (OECD et al., 2017). Public health expenditure (PHE) is our main institutional variable. It measures the sum of expenditures financed by state, regional and local governments, as well as compulsory contributory health insurance, including social security schemes and mandatory private insurance coverage, taken as a percentage of total health expenditure (THE). Further, we distinguish between two types of public financing schemes: government schemes and compulsory contributory health insurance schemes. This allows us to distinguish between NHS single-payer systems, with benefit entitlements that are non-contributory, typically universal and with automatic mode of participation (*government schemes*) and compulsory contributory health insurance systems with benefit entitlements that are largely contributory, based on payments by or on behalf of the insured person, or upon a purchase of an insurance policy from a selected health insurance company or other agency and whose mode of participation is mandatory (*compulsory contributory health insurance schemes*). We also control for the logarithmic function of the total amount of healthcare expenditure (THE) (per capita, current prices, PPP, US\$) as it reflects economic development and the total financial investment in healthcare.

Information on country level characteristics refers to the years when

the ISSP fieldwork was carried out. In most countries, the ISSP was surveyed in 2011 and information on country level characteristics was included from that year. Exceptions are Denmark and Poland, which were surveyed in 2013. Australia, Czech Republic, Norway, Germany, Portugal, Slovakia, Turkey, United States, Italy, and Spain were surveyed in 2012. Table 1 provides information on the response rates, sample sizes, and country characteristics. Correlation statistics are provided in Table S2 in the Supplementary Material.

3.4. Statistical analysis

We apply multilevel modelling techniques to estimate the effects of individual-, and country-level characteristics and their interaction. Unlike conventional regression analysis, multilevel models account for a hierarchical or nested data structure, whereby observations at lower levels are nested in higher order units. We distinguish between two analytical levels: the ‘macro level’ (country of residence; $N = 28$) and the ‘individual level’ (respondents, $N = 46,047$). With an intraclass correlation of 0.10 at the between-level, the use of multilevel models for the analysis is highly recommended. In this study, we use *random intercept models* to test the relationship between institutional factors and unfairness perceptions. *Random intercept models* allow intercepts to vary across countries. Variations in intercepts can be explained (i) by country level predictor variables that explain contextual variation in the outcome variable, and (iii) by individual level variables that control for the compositional variation of the residential population. To investigate whether the effects of institutional characteristics vary with the socio-economic characteristics of the individual, we use *random coefficient models*. *Random coefficient models* allow for variation of coefficients of categorical individual-level predictor variables across countries. Variation in coefficients can be explained by country-level predictors modelled as cross-level interactions. The random intercept measures the country-level variation of the reference category of the categorical variable, while the random coefficients for the dummy variables measure the country-level deviations from the country-specific intercept of the reference category (Heck and Thomas, 2015).

We perform step-wise multilevel regression analyses to test our hypotheses empirically. For ease of interpretation, we present results of the linear regression analyses. We also ran binary logit models, which produced similar results. We used the dummy variable adjustment approach to handle missing information on household income and health insurance coverage. Estimates based on Full Information Maximum Likelihood (FIML) provide similar results (see Table S3 in Supplementary Material). We estimate all models using maximum likelihood with robust standard errors with Mplus, version 8 (Muthén and Muthén, 2015). At all stages, we control for the respondent's characteristics at the individual level. To ensure that the results were not driven by specific countries (outliers), we re-ran the analyses excluding countries one-by-one from the analysis. The results for selected models are reported in Table S4 and S5 in the supplementary material.

4. Results

Inequalities in healthcare tend generally to be perceived as unfair: in 22 out of 28 countries more than 50% of the population judge inequalities as either “somewhat unfair” or “very unfair” (Fig. 1). Perceptions of unfairness are especially high in Slovenia (84%), France (81%), Italy (80%), and the Netherlands (80%). Smaller percentages are observed for South Africa (38%), China (43%), Finland (45%), Great Britain (46%), South Korea (47%), and Lithuania (48%).

At the individual level, and in line with prior research (von dem Knesebeck et al., 2016), results of the multilevel regression models show members of more advantaged groups report lower unfairness, whereas members of more disadvantaged groups perceive inequalities in healthcare to be more unfair (Table 3, Model 1). Specifically, higher income groups perceive inequalities as less unfair than lower income

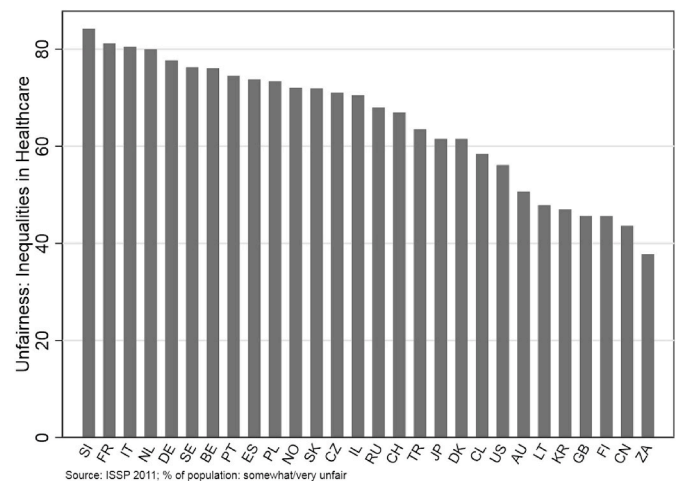


Fig. 1. Inequalities in healthcare perceived unfair (somewhat/very unfair) across Countries (in %).

groups; the chronically ill, individuals with bad health status and bad insurance cover and those who reported to have forgone medical care due to costs show higher perceptions of unfairness than their respective comparison groups. Unfairness perceptions are also higher for women than for men, and older compared to younger age groups. Interestingly, however, only 1.8% of the variance at the micro-level can be explained by these demographic and socio-economic differences.

After controlling for individual-level characteristics, considerable variation in the unfairness perceptions at the country-level persists (between-level variance: 0.177). In the following, we investigate whether unfairness perceptions are related to cost barriers to accessing healthcare, and to the financing mechanisms in place for healthcare.

Our findings are consistent with hypothesis 1 which suggested that unfairness perceptions are formed by existential standards. We find a significant and negative relationship between structural (cost) barriers to healthcare and perceptions of unfairness (Table 3, Model 2): the higher the share of population reporting an unmet need due to cost, the lower the perceived unfairness of inequalities in healthcare ($\beta = -0.297$, $SE = 0.069$). This relationship is not linear but logarithmic; after reaching a certain level of cost barriers the relationship between cost barriers and unfairness perceptions is less strong. These findings are particularly interesting, if compared to the individual level. As stated above, persons who reported to have forgone medical care due to costs, perceive privileged healthcare for the better off to be more unfair ($\beta = 0.146$, $SE = 0.035$). However, and independent of their personal disadvantages, individuals find additional payment for better healthcare less unfair, when the share of population in the country that reported forgoing medical care due to costs is high. As disconcerting as these opposite effects may appear at first sight, both are in line with the existing literature supporting our hypothesis on existential standards at the contextual level as well as the common assumption on self-interest and health care needs at the individual level. In fact, these results illustrate well how important it is to theoretically and conceptually distinguish between the relationships of two factors at different analytical levels.

With regard to financing mechanisms, three general findings emerge from the analysis (Table 3, Model 3): Firstly, we find that the higher the overall expenditure on healthcare, the higher the perceived unfairness ($\beta = 0.241$, $SE = 0.074$). This relationship is not linear, but logarithmic. Beyond a basic level of financing, the effect on perceived unfairness levels off, and is less strong. This indicates that individuals are less inclined to perceive healthcare inequalities as unfair, if they live in economically weak and less developed countries that spend less on healthcare. Secondly, we find that unfairness perceptions vary systematically with the composition of health expenditure. Public health

Table 3
Multilevel models for perceived unfairness of inequality in healthcare: Individual, contextual, and institutional determinants.

	Model 1		Model 2		Model 3		Model 4	
	β	SE	β	SE	β	SE	β	SE
Intercept	3.659***	.086	4.139***	.121	3.659***	.070	3.890***	.151
Within Level								
Female (0 = male)	.132***	.035	.132***	.035	.132***	.035	.132***	.035
Age Groups (0 < 40)								
40-60	-.024	.022	-.024	.022	-.024	.022	-.024	.022
> 60	-.080*	.033	-.080*	.033	-.081*	.033	-.081*	.033
Rural (0 = urban)	-.033	.036	-.034	.036	-.033	.036	-.034	.036
Subjective Health (0 = excellent/v. good)								
Good	.056**	.018	.056**	.018	.056**	.018	.056**	.018
fair/poor	.187***	.029	.187***	.029	.187***	.029	.187***	.029
Chronic health condition (0 = no)	.032*	.014	.032*	.014	.032*	.014	.032*	.014
Education (0 = low)								
Medium	.002	.024	.002	.024	.001	.024	.001	.024
High	-.040	.031	-.040	.031	-.041	.031	-.040	.031
HH-Income (0 = lower tercile)								
2nd tercile	-.012	.029	-.012	.029	-.012	.029	-.012	.029
3rd tercile	-.103**	.034	-.103**	.034	-.103**	.034	-.103**	.034
No income information	-.074+	.041	-.074+	.041	-.074	.041		
Insurance cover (0 = well covered)								
Not well covered	.136**	.041	.137**	.041	.137**	.041	.137**	.041
No insurance information	.114**	.038	.115**	.038	.115**	.038	.115**	.038
Unmet need due to costs (0 = no)								
Unmet need	.146***	.035	.147***	.035	.146***	.035	.147***	.035
No need for medical care	.001	.018	.001	.018	.001	.018	.001	.018
Between Level								
Structural Barriers to HC Access								
% Unmet need due to costs (log)			-.297***	.069			-.142+	.075
HC Financing Schemes								
THE (log, ppp, US\$)					.241***	.074	.165*	.067
PHE (% THE)					.015***	.004	.012**	.004
Contributory insurance (% PHE)					.003*	.002	.003+	.002
Variance (Within)	1.409***	.090	1.409***	.090	1.409***	.090	1.409***	.090
Variance (Between)	.177***	.038	.123***	.026	.098***	.025	.090***	.022
AIC	146650.245		146642.064		146639.746		146639.416	

Note: International Social Survey Programme (ISSP), Module “Health and Healthcare” from 2011/13; sample size individuals: N = 46,047, countries: N = 28; table reports unstandardized coefficients (β) and standard errors (SE); all analyses also control for respondent with no information on income or/and insurance coverage; + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (two-tailed test).

expenditure as a percentage of total health expenditure is significantly and positively related to perceptions of unfairness: the higher the public spending on healthcare, the higher the unfairness perception within the population ($\beta = .015$, SE = 0.004). This finding is consistent with neo-institutionalist theory and hypothesis 2 that suggested publicly financed healthcare provides institutional legitimacy for the norm of universal and equal healthcare delegitimizing the purchase of superior healthcare. Thirdly, and digging deeper into the composition of public expenditures, we find a positive – albeit weak – relationship between compulsory contributory financing and unfairness perceptions: the higher the share of compulsory contributory financing, the higher perceptions of unfairness for unequal healthcare ($\beta = .003$, SE = 0.002). This finding was also supported using a different operationalization of public healthcare financing. Distinguishing between three healthcare financing categories, results show that individuals living in systems in which public financing is primarily compulsory contributory (> 80%) perceive inequalities as more unfair ($\beta = 0.280$, SE = 0.165) than individuals living in systems in which public financing is primarily from taxation (> 80%). These findings are significant at the 10% level. Yet, results seem to depend on the sample selection (see Table S4 in Supplementary Material). In particular, we observe a drop in significance, when we exclude Great Britain from the study sample. Great Britain is a country that is exceptional in many respects: it is the prototype of a universal tax-financed NHS system, but considered highly liberal in other policy fields. Therefore, it may not be of great surprise that only 46% of the population find the purchase of superior healthcare by the more affluent pictured somewhat or very

unfair – a relatively low percentage in comparison to most other European countries. The specifics of the case seem to drive the positive relationship between compulsory contributory healthcare financing and unfairness perceptions. All in all, the size of the effect, the level of significance, and the sensitivity of results due to sample selection warrant caution in interpreting these results regarding hypothesis 3b. However, even if further empirical research demonstrates that there is no difference between single payer and multi-payer systems with regard to unfairness perceptions, this would be an important finding in and of itself.

To better understand the prevailing nature of contextual characteristics, we tested the competing effects of cost barriers to healthcare and healthcare financing mechanisms on perceptions of unfairness in a single model (Table 3, Model 4). Results show a drop in the size and the significance of the effect related to cost barriers – a finding that is even more pronounced if certain countries are excluded from the analysis. This suggests that the effects of institutional norms embodied in public healthcare financing prevail over existential standards stemming from cost barriers – an assumption that is supported by correlation statistics that show that cost barriers are inversely related to the public expenditure within a country (see Table S2 in supplementary material) and by the existing literature that views public financing as a key lever for governments to provide universal access to healthcare and to reduce cost barriers to healthcare access.

All in all, cost barriers to healthcare explain up to 30.7% of the variance at the between-level; institutional characteristics explain up to 44.8%. Together, they explain 49.3% of the variation in unfairness

Table 4
Random Coefficient Models: Cross-level Interactions of Financing Schemes and SES groups.

	Income Groups			Educational Groups		
	Low	Medium	High	Low	Middle	High
Intercept	Ref.	-.021 (.025)	-.129*** (.028)	Ref.	-.018 (.019)	-.074* (.032)
THE (log, ppp, US\$)	.281*** (.060)	-.059 (.040)	-.067 (.050)	.229*** (.066)	-.002 (.032)	.012 (.062)
PHE (% THE)	.019*** (.004)	-.003 (.003)	-.007* (.003)	.019*** (.004)	-.005* (.002)	-.006+ (.003)
Contr. compul. insurance (% PHE)	.004* (.002)	.000 (.001)	.000 (.001)	.004* (.002)	-.001 (.000)	-.001+ (.001)

Note: International Social Survey Programme (ISSP), Module “Health and Healthcare” from 2011/13; sample size individuals: $N = 46,047$, countries: $N = 28$; table reports unstandardized coefficients (β) and standard errors (SE) in parenthesis, all analyses control for demographic and socio-economic characteristics (see Table 3); $+p < 0.10$, $*p < 0.05$, $**p < 0.01$, $***p < 0.001$ (two-tailed test).

perceptions between countries.

Finally, we address the issue of whether all socio-economic groups are equally responsive to institutional norms, specifically public health care financing (Table 4). Random coefficient models show that the effect of public health expenditure on unfairness perceptions is less strong for individuals with higher income ($\beta = -0.007$, $SE = 0.003$) and higher education ($\beta = -0.006$, $SE = 0.003$), than for lower income and educational groups. These findings support hypothesis 4 which suggested that more disadvantaged groups not only perceive inequalities in healthcare as more unfair; their unfairness perceptions also vary more strongly with the institutional characteristics of a country, specifically public financing of healthcare.

5. Discussion

In this paper, we examined the relationship between institutional context and public attitudes about unfairness in healthcare inequality using data of the ISSP from 2011/2013, matched with information from the OECD health expenditure and financing database. The following three general findings emerge from the study:

First, and in line with our hypothesis on existential standards (H1), we find the prevalence of cost barriers to healthcare access is negatively associated with the individual's perception of unequal healthcare as being unfair. On average, individuals living in countries with a higher share of unmet needs due to costs perceive inequalities in healthcare to be less unfair. Based on empirical social justice theory, we argued that this is because individuals incorporate the societal status quo into their fairness perceptions and rely on this metric to define what is normal and to be expected. Using cost barriers to accessing healthcare as an existential standard of justice that legitimates inequalities in healthcare, our results are consistent with the expectation that individuals seem to adapt to the status quo in society and adjust their normative preference regarding the right to health care accordingly. It is noteworthy, however, that these existential standards depend in part on the institutional structure of the healthcare system as well as the country's social and economic development. This explains the high correlation between cost barriers and healthcare care financing mechanisms. Overall, we find the effects of healthcare norms, embodied specifically by the amount of public healthcare financing, to prevail over the effect of existential standards.

Second, and in line with our hypotheses on social norms and the impact of healthcare financing mechanisms (H2), we find that the degree to which health expenditures are publicly financed is positively associated with perceptions of unequal healthcare as being unfair. This

is consistent with neo-institutionalist theory and the assumption that equalitarian norms of healthcare access appear to be strengthened, when healthcare is institutionally defined as a matter of public responsibility. Results on the composition of public health financing have to be interpreted carefully and no fast conclusions can be drawn. Although our findings point into the direction that compulsory contributory health financing is positively associated with unfairness perceptions (H3b; in contrast to H3a), effects are albeit weak and results are sensitive to the sample selection and the inclusion of other predictor variables.

Third and finally, examining the interaction of the individuals' socio-economic situation with healthcare institutions, we find in support of our health rights hypothesis (H4) that the association between healthcare institutions and unfairness perception is stronger for individuals with lower income and education. This may be a key mechanism for explaining the lack of public protests against healthcare inequalities. Precisely where public financing for healthcare is low, perceptions of the unfairness of healthcare inequalities amongst the disadvantaged are also low, whereas with higher public financing, lower income and educational groups have adopted a more equalitarian outlook on healthcare and are presumably more prepared to fight for their healthcare rights.

There are some important limitations to our study. First, this study is limited by its cross-sectional design and provides only a confined snapshot of the association between healthcare institutions, existential standards, and unfairness perceptions at one point in time. Therefore, any causal interpretation of our research findings is based on theoretical reasoning rather than empirical evidence. Over time, it is likely that citizens' attitudes about the unfairness of healthcare inequality might affect the degree to which health is publicly financed. In addition, attitudes may be influenced by the long-term history of their health system, which might not be captured in the current OECD measures. As more specific data on healthcare financing and unfairness perceptions become available, larger comparisons across countries and over time may provide a clearer picture on how healthcare institutions determine unfairness perceptions and how the public's opinion may feed back into the policy process.

Second, we cannot rule out that our dependent variable functions differently across individuals and contexts. Specifically, we do not know how respondents interpret the word “better” healthcare when rating the unfairness in affordability between people of different income groups. This could range from better medical treatment, to the number of beds in a hospital room, the waiting time in the doctors' office, the distance to medical facilities, or even amenities such as visiting hours and greater choice of meals. Furthermore, interpretations may vary systematically between individuals living in different cultural, economic and political settings (Harkness et al., 2003). The geographic reach and heterogeneity of countries covered by the ISSP study may suggest so. More research is certainly needed that tests the equivalence of the public's attitude towards the unfairness of inequalities in healthcare using a multi-item measurement. Nevertheless, and despite using a single item measure for this study, we can say with some certainty: if those with higher incomes can have better healthcare than those with lower incomes, our dependent variable clearly taps into attitudes about some form of healthcare inequality and its normative evaluation in terms of unfairness, which we see as indicative of a norm of universal and equal right to healthcare.

Third, the OECD health expenditure data does not allow a more complete analysis of the difference in the effect of mandated private health insurance versus compulsory public insurance, as this distinction is currently not available for all countries. In the future, research may want to distinguish between these subcategories in healthcare financing to provide a more detailed analysis of its interrelatedness with fairness perceptions. However, the number of cases with mandated private health insurance that covers most of the population is relatively low (Netherlands and Switzerland). Moreover, the private healthcare

carriers in the Netherlands are the former public sickness funds and private insurance companies; in Switzerland the carriers are highly-regulated non-profit divisions of private insurance companies that have received direct government subsidies until the mid-1990s. Thus, in many ways the carriers of private mandated insurance are public-private hybrids, similar in many ways to social health insurance carriers. Nevertheless, as a robustness check, we have removed both cases from the analysis and receive similar results. Therefore, we are confident that the mandated cases are not driving the analysis.

Finally, as attitudes on health inequality have been shown to diverge from those on healthcare inequality (Lynch and Gollust, 2010), we should state that we have only addressed attitudes on healthcare inequality, but not on the broader question of attitudes to health inequalities. Overall, our results are only a first step of a larger research enterprise that looks into the links between healthcare institutions and public opinion, with more research to be expected in the near future.

Healthcare institutions are the result of long-term political processes that have determined to which extent healthcare will be financed and provided by government, associations or markets. Political resources and political institutions have structured these processes in the past. A number of scholars have pointed to the importance of these past legacies for the course of health politics today (e.g., Hacker, 2002, 2004; Hollingsworth et al., 1990; Immergut, 1992; Immergut et al., 2020). Our particular contribution is to provide evidence that two distinct aspects of the structure of healthcare financing are significantly associated with attitudes towards healthcare inequality. We interpret this empirical association theoretically as reflecting the strength of a norm of an equal and universal right to healthcare. In this way, healthcare institutions are part of the political environment and structure of power that will shape health politics in the future. Given that current research on health inequalities is incorporating just such effects of power, politics, and policies into fundamental cause theory in innovative ways (c.f., Beckfield, 2018; Gkiouleka et al., 2018), we urge that the normative power of institutions be taken up as an explicit dimension of further research in this area.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.socscimed.2020.113146>.

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