African Union

The link between documentation status, occupation status, and healthcare access for African migrants. Evidence from Kenya, Nigeria and South Africa

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Abstract

The link between migrants' legal and employment status, access to health and health outcomes is widely explored in the academic literature on migration and health. However, there are few, if any, studies examining this link within African states. In this article, we present survey data collected from refugees and people in refugee-like situations in Kenya, regular (labour) migrants in Nigeria, and irregular migrants in South Africa to examine the link between registration status, employment or occupation status, gender, and (perceptions of) health access. A range of statistical tests and models were applied to examine the effects of these different characteristics. A consistent finding throughout the three sample countries is that access for people without any documentation is lower than various other groups, not only by means but also within the linear models. This strongly suggests that extending regularization pathways in African states, even if on a temporary basis, would be an effective policy lever to improve migrants' access to healthcare, and by extension migrants' health. However, the effects of employment status and gender on health access were more ambiguous, and further research in African contexts is required to clarify their impact.

Introduction

The impact of migration on health, and that of the link between migrants' health status and their registration status is an area of growing interest and importance amongst scholars and policymakers alike. There is already a substantial body of literature that examines the linkages between migrants' health outcomes, and states' migration policies, especially where these are restrictive or exclusionary, as well as the impact of registration status on health outcomes and access to health services (see, inter alia, Juarez et al 2019, Wickramage et al 2019).

However, as Castañeda et al note, the vast majority of these articles focus on migrants' health or access to health in high-income countries, with only 3% covering the WHO African region (Castañeda et al 2015). Moreover, many also consider the impact of exclusionary, xenophobic, or racist policies and practices on migrants to high- or medium-income countries from other regions (Filges et al 2016, Martinez et al 2013; Venkataramani et al 2017). Whilst this is an important area for further research and policy focus, and there is undoubtedly some evidence of xenophobic or racist attitudes towards African migrants in other African countries, it is likely that this is mediated and experienced differently in intra-African rather than extra-African migration contexts (c.f. Crush and Ramachandran 2009, Akinola 2018, King 2019).

In this article, we consider the impact of African migrants' registration status on migrants' (perceptions of) health status in Kenya, Nigeria, and South Africa, based on primary data collection in these countries. It is often assumed that migrants' registration status affects their health and access to health services, and data from other regions supports this hypothesis, which has also underpinned advocacy efforts from international agencies and NGOs for increased regularization of migration (Freier 2020; Kraler 2019, Kassoudji 2016). Logically and experientially, this would appear to be the case. But we were interested to test this assumption by analyzing data from different sub-categories of migrants in three heterogeneous African contexts.

In 2020, a research team at the Centre for Rural Development (SLE) at the University of Humboldt in Berlin undertook a research project for the African Union Commission (AUC) and Gesellschaft für Internationale Zusammenarbeit (GIZ) examining migration and health policy and practice across Africa. The project was divided into two main phases of data collection. The first phase of this comprised a scoping study of relevant policy and governance frameworks for migration and health at the continental, regional, and Member State levels (15 AU member states were selected, three from each of the five African regions), as well as a literature review of relevant scientific and academic literature. The second phase comprised of primary data collection on three migrant sub-groups in three African countries: refugees and people in refugee-like situations in Kenya; regular (labour) migrants in Nigeria; and undocumented migrants in South Africa (AUC and SLE 2021). Primary data collection included surveys of the migrant-sub groups in each of the three countries, complemented by semi-structured key informant interviews and focus group discussions with migrants, government officials, and health workers in each country (Ibid.).

Analysis of secondary data identified in the study showed that there was a lack of research on intra-African migration patterns and trends, especially at the regional and continental levels, and, specifically, a lack of routine data collection on migrants' health (AUC and SLE 2021). Primary data collected in the second phase of the study indicated that migrants from all three sub-categories reported being in better health before they departed from their country of origin than upon arrival in their country of settlement, and at the time of data collection (AUC and SLE 2021b). It also suggested a positive correlation between health status and access to health services, and between registration status and health status (ibid).

In addition, the data showed that the majority of respondents enjoyed at least a certain degree of social coverage - i.e. they were able to access some health services - in the three countries concerned, either as a result of their registration status (in Nigeria and Kenya) or due to policies and programmes that enable undocumented migrants to access health services (in South Africa and Kenya) (Ibid.).

In this article, we seek to examine the effects of registration status on respondents' (perceptions of) health through statistical analysis of the survey data collected from these surveys. We argue that across these heterogeneous contexts the data show that registration status, even temporary registration, has an impact on migrants' health as well as their access to healthcare. Our discussion about these characteristics will be enriched by additional data about potential variations. It is hoped that policymakers will find this evidence useful for better-informed decision-making to improve health access for migrants.

The structure of this article is as follows: first, we provide a common understanding of most of the important terms in this paper by defining them and briefly present the drivers for them. Second, we describe the data collection process and its analysis along with the methodology. Third, we present findings from the analysis. This is followed by a broader discussion, which informs the recommendations and conclusion of this article.

Theoretical background and definitions

In this section, we explore the theoretical background and common understanding of migrants' health and access to healthcare. We also define and discuss key terms used.

Migrants

For this article, we use the umbrella term "migrant", which even though it has no universal legal definition, reflects the common understanding of a person who moves away from his or her place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons (IOM 2019, p. 132). However, this article does not consider "internal migrants", including internally displaced people and rural-urban in-country migrants, as the focus of the research is on transnational intra-African migrants.

The main groups of interest to this article were international regular (labour) migrants, refugees, as well as irregular migrants and people in refugee-like situations, in Nigeria, Kenya, and South Africa. Table 1 in the Appendix sets out definitions used (adapted from Zimmerman et al 2011). It should also be noted that these categories are not necessarily constant. People's status and categorization imposed on them by international law and states' application of these may change repeatedly on their journeys, a phenomenon which is increasingly termed "mixed migration" (Mixed Migration Centre 2020).

Migrants and refugees are often marginalized in their communities and countries of settlement and can face multiple barriers to access entitlements and services (O'Donnelll et al 2016, Mphambukeli and Nel 2018). Reasons for this can include having a different mother tongue, differing cultural backgrounds, restrictive policy environments, or just the challenges of adapting to living in a new society (Helgesson et al 2019, Flahaux and De Haas 2016). The disadvantage may be intensified depending on the manifestation of other characteristics, such as gender, documentation status or occupational situation.

Migrants' health

The World Health Organization (WHO) defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO 1946, p. 1), which will be used as a definition of this study as well. A significant body of research has sought to explain migrants' health in terms of structural factors, such as legal status, discrimination, or access to healthcare (Almeida et al 2013; Hacker et al 2015). However, this has been complemented, and in some ways challenged, by the WHO-led 'social determinants of health' (SDH) framework, which takes a broader view of the socio-economic factors, such as employment, housing, and education underpinning migrants' health (WHO 2010; Braveman et al 2011; Braveman and Gottlieb 2014).

Although not originally considered as part of the SDH framework, IOM embraced the idea that migration was a social determinant of health in 2009 (IOM 2021). Migration is viewed both as a consequence of other social determinants of health and as an important social determinant affecting other determinants (WHO 2013). Nevertheless, the SDH approach has been criticised for its tendency to prioritize socio-economic factors over other factors influencing migrants' health, including ethnicity and culture, or indeed migration itself (Hossin 2020; Ingleby 2014).

Certainly, the relationship between migration and health is complex. On the one hand, the conditions surrounding migration may have an impact on migrants' health and exacerbate vulnerabilities and risky behaviour. For example, people who are forcibly displaced may be vulnerable to trauma-induced disorders such as Post-Traumatic Stress Disorder (Heeren et al, 2012). Another example includes women, who are at a greater risk of gender-based violence during and post-migration which can have severe physical and mental consequences (Fiddian-Qasmiyeh, et al 2014).

Despite these high vulnerabilities, migrants often face difficulties in finding and accessing appropriate treatment in settlement countries. Different factors such as the lack of a required legal status, stigma, language barriers, discrimination and lack of income may exclude them from accessing healthcare services (see, inter alia, Sterud et al 2018; Bradby, et al 2015; Suphanchaimat et al 2015).

On the other hand, migration itself can provide opportunities to achieve better health care, and studies have shown that often the migrant population is on average healthier than the local population. This phenomenon has been described as the "healthy migrant effect" which refers to (self-)selection processes during migration whereby healthy and resilient persons, in particular, decide to migrate (Kennedy et al 2015 ; Razum 2008; Kumar and Diaz 2019).

In order to grasp all the different aspects of health access, we asked participants to assess their own health status on a scale of one (inexistent) to ten (excellent).

Health access

WHO defines health access or accessibility as comprising physical accessibility, economic accessibility, and information accessibility (Evans, Hsu, and Boerma 2013). Physical accessibility is 'understood as the availability of good health services within reasonable reach of those who need them and of opening hours, appointment systems and other aspects of service organization and delivery that allow people to obtain the services when they need them" (Evans, Hsu, and Boerma 2013). This, in turn, builds on WHO's earlier definition that 'health facilities, goods and services must be within safe physical reach for all sections of the population, especially vulnerable or marginalized groups, such as ethnic minorities and indigenous populations, women, children, adolescents, older persons, persons with disabilities and persons with HIV/AIDS, including in rural areas (WHO 2002 p. 12).

Economic accessibility – also referred to as affordability – 'is a measure of people's ability to pay for services without financial hardship. It takes into account not only the price of the health services but also indirect and opportunity costs (e.g. the costs of transportation to and from facilities and of taking time away from work).' (Evans, Hsu, and Boerma 2013). Finally, information accessibility refers to 'the right to seek, receive and impart information and ideas concerning health issues' without compromising patient confidentiality (WHO 2002 p. 13).

Access to health care may reflect how well a group is embedded in society. If variations arise based on sociodemographic characteristics, it may be considered unequal treatment (Nørredam & Krasnik 2011). Many possible proxies could be used to measure health access, for example, clinical measurements such as mortality (e.g. excess deaths) or length of stays in clinics (Nørredam et al 2007). However, such approaches require large samples to control for all necessary covariates that influence health access.

Besides access to the health system, the need for migrant sensitive health systems has been identified as necessary by the 61st World Health Assembly (WHO 2018). Therefore, workforce training (e.g. about mental health issues) or, reduction of barriers such as communication, may enhance the perceived health access (ibid.).

Gender

Female migrants can be more vulnerable than other groups, for example, in the case of exploitation in low paid domestic work or trafficking (WHO 2018). A bias exists as most data is based on men and thereby health needs of women are neglected (Perez 2019). As a result, humanitarian action or laws could be designed for male migrants rather than females. For example, the support of women who have become a victim of gender-based violence along the migration route is likely to be disregarded as there are few, if any, safe or private spaces to share their stories or complaints (Women's Refugee Commission 2016). Further, the majority of victims of human trafficking are females (UNODC 2009 p.11). Thus, health needs of women are different and not always adequately met. This is why the SDG 5 is focused on gender equality and indicator 5.2.2 measured the violence against women and girls (United Nations Department of Economic and Social Affairs 2020).

Occupation

Health disparities may arise based on the occupation situation of a migrant. Moyce and Schenker (2018) emphasize environmental exposure (e.g. pesticides), working conditions (e.g. physical hazards) or trafficking and forced labour in general as potential disadvantages. Hargreaves et al (2019) conclude that because of such existing higher risks accessible and affordable health care are important to cope with special health needs. In line with this, SDG 8.7 and 8.8 aim to prevent human trafficking and protect labour rights (United Nations Department of Economic and Social Affairs 2020).

Documentation status

The legal status granted to different sub-groups of migrants by states, often on the basis of their reasons for migrating and their migration journeys, defines their residence status. Potential groups of migrants in this category will be people with permanent documentation (e.g. labour migrants), migrants with temporary documents (e.g. refugees, asylum-seekers or students) and migrants without a legal status (e.g. undocumented migrants).

International and national laws categorize migrants into different groups, giving them different rights in their countries of residence (AUC/ SLE 2021a). The application of these laws may affect access to national healthcare. SDG 10.7. aims to ensure well-managed migration policies and measures such as migrants' right to health care (United Nations Department of Economic and Social Affairs 2020). Several studies have identified varying rights to health access based on documentation status (Pace 2009). As a result, irregular migrants seek medical assistance less often than local populations or regular migrants and in doing so, they are neglected in vaccinations, pregnancy care or safe childbirth (IOM 2011).

Methodological approach

The goal of this article is to identify differences in health access based on different characteristics. This informs our research question, which is "do gender, occupation or documentation status affect the perceived health access of migrants?" For this purpose, the hypothesis that there are no differences in the rated health access between such groups shall be tested, while conversely, distinctions between groups exist, such as the impact of one factor on the overall health access for means and medians of the groups.

Data collection was done as part of a study on the health care of different groups of migrants in Africa (AUC/ SLE 2021b). A survey was conducted in order to collect quantitative data on migrants' health and access to health services. Existing surveys from the Health on the Move Project and relevant WHO surveys were adapted towards the specific needs and context of this project[1]. The survey targeted different cohorts in the three study countries, in order to represent many migrant groups. As a result, in Kenya most of the respondents are refugees, in Nigeria, most of the respondents are labour migrants, and in South Africa, most of the respondents are irregular migrants.

The questionnaires were distributed both digitally and also in print format by partner researchers among the specific groups of migrants. Surveys were distributed in English and translated into local languages by partner researchers. Surveys included multiple selection, single selection, ranking and open answer fields. Quantitative data collection ran from November until December 2020. Respondents could fill out questionnaires if they had the link to the survey, which was provided by research teams and distributed among migrant networks in each country. Most answers were collected through field teams in an interview manner, where the data collectors addressed people and went through the surveys question by question. A total of 965 eligible surveys were acquired, with South Africa n = 310, Nigeria n = 355, and Kenya n = 300, respectively. Surveys were excluded if the respondents did not live in any of the three countries or if they were not from the African continent. By this, seven respondents were withdrawn from the dataset.

1 https://www.surveymonkey.com/r/MyHealthMigrantsRefugeesNeeds?lang=en and https://www.aparttogetherstudy.org/

Based on this data, we will identify differences in health access within the different sub-groups, which are characterized through different answers. Therefore, the question "How do you rate the general access of the health care provision where you currently live? (10= excellent, to 1= inexistent)" will be used as an indicator of health access. In order to identify different groups within the data, the survey asks for gender, residence status and occupation. Only one response was possible for each question and it was not mandatory to reply to them. People who have not replied to one of the questions are excluded from the calculations. Please see Appendix 5 for the question and the possible answers. In addition to the quantitative evidence, migration and health experts were interviewed for further insights regarding access in general, restrictions to, or the health system itself, via online semi-structured interviews.

To examine the different groups, we calculate the means of the groups and use a t-test to check if the differences are significant. We only consider groups that consist of at least 10 people. The comparison will only be made between different groups of the same country, to ensure fixed country effects are not responsible for the measured impacts. Additionally, a least squares linear regression model is calculated. A variable characteristic in each category is used as a dummy to indicate its effect on the self-rated health access when controlled for the other variables. People who do not answer all of the previously named questions are not included within the linear model. The necessary assumptions used to apply this model, such as heteroskedasticity and uncorrelated independent variables, were checked and Appendix 2 and Appendix 3 provide the results.

The respondents to the survey were not always selected completely at random. In order to ensure that potential differences are not entirely based on different covariates between the groups, a Kruskal Wallis test will determine if differences exist (Kruskal and Wallis 1952), even in the cases where normal distribution is absent. As this test is used to identify differences between groups of more than two, it is only applied to the variables of residence status and occupation, the results of the test will be presented in Appendix 4.

Calculations and table drawings are made in RStudio and LaTeX.

Findings

The following table describes the effects of the individual manifestations of the cohorts for the countries Kenya, Nigeria and South Africa. People who did not respond to one of the questions are excluded.

Table 1: Impact of gender, residence and occupation on self-rated health access

	Dependent variable:		
	Kenya	Nigeria	South Africa
Gender: Male	0.019	0.340**	0.001
	(0.234)	(0.172)	(0.217)
Documentation: None	-0.370	-0.265	-1.928
	(0.750)	(0.362)	(1.323)
Documentation: Work	0.918	0.865***	-1.552
	(1.337)	(0.305)	(1.378)
Documentation: Prefer not to say	-0.402	-1.061**	-5.083***
	(1.123)	(0.436)	(1.857)
Documentation: Temporary (Asylum)	-0.940*	0.245	-0.930
	(0.528)	(0.344)	(1.337)
Documentation: Temporary (Refugee)	-0.233	0.482	-1.903
	(0.369)	(0.392)	(1.423)
Documentation: Temporary (Education)	0.724	0.976***	-0.382
	(1.082)	(0.333)	(1.504)
Occupation: Self-employed	-0.394	-0.383	1.231
	(0.673)	(0.311)	(1.084)
Occupation: Unemployed	-0.080	0.331	1.398
	(0.677)	(0.413)	(1.091)
Occupation: Full-time work	0.043	-0.091	2.049*
	(0.824)	(0.336)	(1.087)
Occupation: Part-time work	-0.212	-0.080	2.951***
	(0.733)	(0.323)	(1.099)
Occupation: Work without contract	1.107	-0.704	0.227
	(0.973)	(0.619)	(1.175)
Occupation: Other	0.436	0.853	
	(1.255)	(1.403)	
Occupation: Retired		0.853	
		(1.403)	
Constant	8.507***	8.073***	7.768***
	(0.642)	(0.356)	(1.714)
Observations	277	278	306
R^2	0.052	0.193	0.204
Adjusted R^2	0.005	0.150	0.172
Note:		*p<0.1; **p<0.05; ***p<0.01	

Gender

Table 2: Mean health status, grouped by gender by gender

	#Total					
	K		NIG		SA	
	Female	Male	Female	Male	Female	Male
	A	B	A	B	A	B
rating_access						
Mean	8.0	8.1	8.4	8.6	7.9	7.8
Std. dev.	1.7	1.8	1.7	1.3	2.1	2.0
Unw. valid N	200.0	87.0	108.0	170.0	158.0	148.0

Table 2 above and Figure 1 below represents the self-assessed health access in different ways: Table 2 displays the overall average with its standard deviation and number of people for each cohort. Figure 1 represents one dot for each survey respondents' rating. Small vertical and horizontal shifts occur so the same rated values do not overlap completely, hence Figure 1 is only an approximated representation of health access. People who did not answer the question regarding their gender or responded "prefer not to say" are excluded from both illustrations, to ensure clarity.

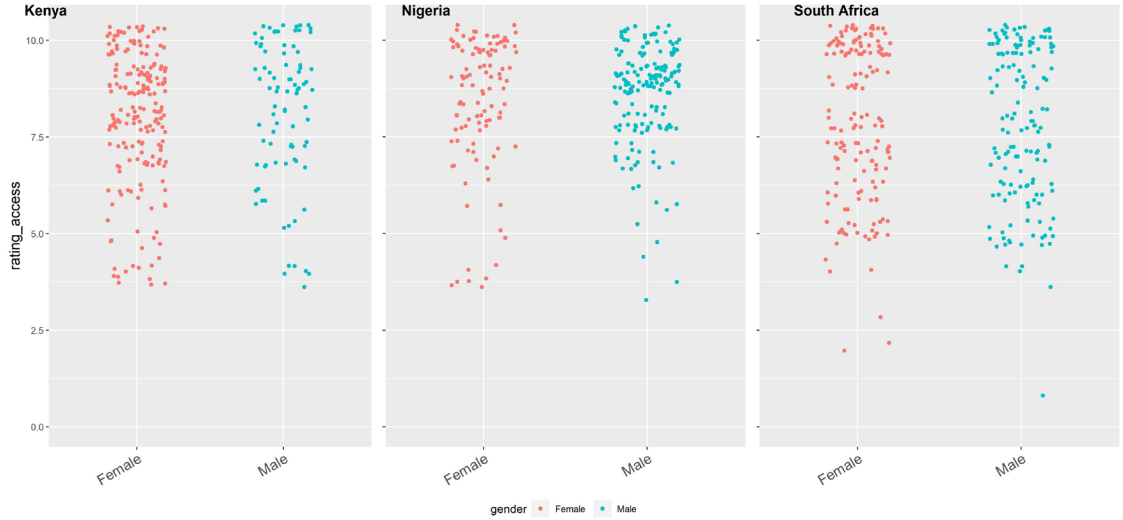

Figure 1: Scatterplot of rating of health access in Kenya, Nigeria and South Africa, grouped by gender cohorts.

Gender has an ambiguous impact on the average health access. However, the differences are not particularly significant, in Kenya and Nigeria male respondents rated their health access by 0.1 and 0.2 points higher. On the contrary, in South Africa female respondents rated it by 0.1 points higher. It is likely that the effects are not clear due to other underlying factors. When we control for occupation and residence status, we notice that male migrants in Nigeria rate their access as significantly better than females by 0.34 points, whilst in the two cohorts in Kenya and South Africa, men and women gave relatively similar ratings of health status as.

In Nigeria, the focus was on labour migrants, thus specific disadvantages faced by women in labour migration and in labour markets could be a reason for this effect. An example of this is their employment in less secure jobs, often without health insurance. However, it could also be a country or context effect of the Nigeria sample that female migrants are particularly disadvantaged in accessing health care. If this effect of better health access in Nigeria for male migrants is a recurrent finding in other studies, further research is needed to explain it.

Apart from this, the data does not reveal too many significant differences based on gender and thus contrary to the literature and also to statements from the interviews. This could be because of sampling bias or survey design, but it could just as equally be that the differences in perceptions of health access are smaller than expected. That does not mean health services do not need to be more responsive to the needs of female migrants, as this relates to their experience of these services, which can be or can become a barrier; it means the effect of gender differences is perhaps less pronounced in terms of health access or perceptions of health.

Occupation

Table 3: Mean health access for Kenya (3.1), Nigeria (3.2) and South Africa (3.3), grouped by occupation.

Please note, that capitalized letters indicate differences between cohorts (α=5%).

Table 3.1. Mean health status in Kenya, grouped by occupation

	#Total						
	I am a student	I am self-employed	I am unemployed	I work full-time	I work part-time	I work without a contract	Other (please specify):
	A	B	C	D	E	F	G
rating_access							
Mean	8.6	7.8 < F	8.2 < F	8.5	8.0 < F	9.5 > B C E	8.8
Std. dev.	1.6	1.9	1.6	1.2	1.7	0.8	1.3
Unw. valid N	12.0	146.0	83.0	11.0	25.0	6.0	4.0

Table 3.2. Mean health status in Nigeria, grouped by occupation

	#Total							
	I am a student	I am self-employed	I am unemployed	I work full-time	I work part-time	I work without a contract	Other (please specify):	I am retired
	A	B	C	D	E	F	G	H
rating_access								
Mean	9.1 > B C	8.1 < A E	8.5 < A	8.5	8.8 > B	7.5	9.0	9.0
Std. dev.	1.3	1.7	0.8	1.5	1.1	2.0		
Unw. valid N	57.0	89.0	34.0	48.0	42.0	8.0	1.0	1.0

Table 3.3. Mean health status in South Africa, grouped by occupation

	#Total					
	I am a student	I am self-employed	I am unemployed	I work full-time	I work part-time	I work without a contract
	A	B	C	D	E	F
rating_access						
Mean	7.0	7.3 > F < D E	7.4 < E	8.2 > B F < E	9.0 > B C D F	6.3 < B D E
Std. dev.	1.4	1.8	2.2	2.1	1.8	1.8
Unw. valid N	4.0	116.0	38.0	70.0	65.0	15.0

Table 3 above and Figure 2 below represent the self-assessed health access in different ways: Table 3 displays the overall average with its standard deviation and number of people for each cohort. Figure 2 represents one dot for each survey respondents' rating. Small vertical and horizontal shifts occur so the same rated values do not overlap completely, hence Figure 2 is only an approximated representation of health access. People who did not answer the question regarding their employment status or responded "other" or "I am retired" are excluded from Figure 2 to ensure clarity.

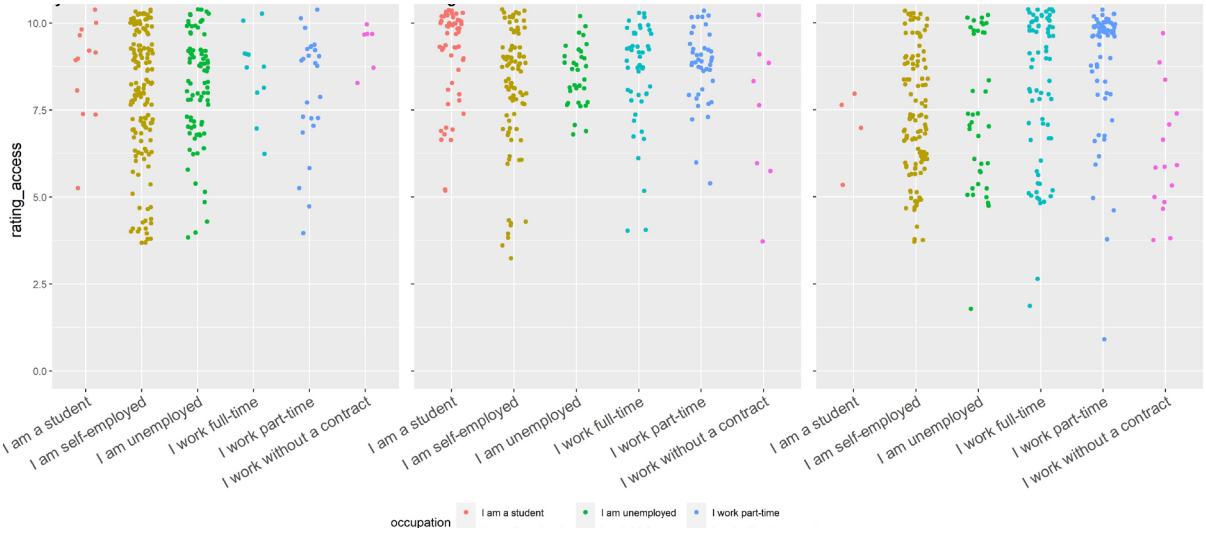

Figure 2: Scatterplot of rating of health access in Kenya, Nigeria and South Africa, grouped by occupation cohorts.

Employment status shows mixed effects on access to health care. Self-employment has a negative effect in all three countries and is significantly lower than in other groups. However, this is no longer the case in South Africa once gender and residence status are taken into account. It is possible that people are self-employed due to their residence status and therefore have reduced access to health care. In Kenya and Nigeria, for example, unemployed people rate their access higher than self-employed ones. Thus, being unemployed does not necessarily mean having less access, which could have been suspected from fewer financial resources.

Part-time and full-time workers seem to position themselves as having better access< However, this effect only holds true for South Africa within the linear model. When people migrate for educational reasons, they rate their health access higher than most other groups of occupation.

This suggests that the effects of occupation are neither intuitive nor consistent, which is further discussed below. However, the Kruskal-Wallis test indicates the groups do not rate their health access equally in Nigeria and South Africa. This result underlines the fact that different types of employment relationships correspond to different experiences of access to healthcare, and that this effect was not caused by the differently distributed covariates. This cannot be said for the Kenya dataset.

Residence status

Table 4: Mean health access in Kenya (4.1), Nigeria (4.2) and South Africa (4.3), grouped by residence status

Please note that capitalized letters indicate differences between cohorts (α=5%).

Table 4.1. Mean health status in Kenya, grouped by residence status

	#Total						
	Citizen	No documents	Permanent documents(work)	Prefer not to say	Temporary documents (Asylum)	Temporary documents(Refugee)	Temporary documents(Education)
	A	B	C	D	E	F	G
rating_access							
Mean	8.4 < C	7.9 < C	10.0 > A B E F	8.0	7.6 < C	8.0 < C	9.2
Std. dev.	0.9	1.6	0.0	1.0	2.2	1.8	1.5
Unw. valid N	32.0	7.0	2.0	3.0	20.0	213.0	4.0

Table 4.2. Mean health status in Nigeria, grouped by residence status

	#Total						
	Citizen	No documents	Permanent documents(work)	Prefer not to say	Temporary documents (Asylum)	Temporary documents(Refugee)	Temporary documents(Education)
	A	B	C	D	E	F	G
rating_access							
Mean	8.0 > D < C G	8.0 > D < C G	9.0 > A B D E	7.0 < A B C E F G	8.4 > D < C G	8.5 > D	9.1 > A B D E
Std. dev.	1.6	1.7	0.9	1.0	1.4	1.7	1.3
Unw. valid N	32.0	49.0	57.0	14.0	36.0	22.0	70.0

Table 4.3. Mean health status in South Africa, grouped by residence status

	#Total						
	Citizen	No documents	Permanent documents(work)	Prefer not to say	Temporary documents (Asylum)	Temporary documents(Refugee)	Temporary documents(Education)
	A	B	C	D	E	F	G
rating_access							
Mean	9.0 > B E F	7.6 < A E	8.0	4.0	8.6 > B F < A	7.5 < A E	8.4
Std. dev.	0.0	2.1	2.2	2.8	1.6	1.6	1.2
Unw. valid N	2.0	202.0	20.0	2.0	60.0	13.0	9.0

Table 4 above and Figure 3 below represent the self-assessed health access in different ways: Table 4 displays the overall average with its standard deviation and number of people for each cohort. Figure 3 represents one dot for each survey respondents' rating. Small vertical and horizontal shifts occur so the same rated values do not overlap completely, hence Figure 3 is only an approximated representation of health access. People who did not answer the question regarding their residence status or responded "Prefer not to say" are excluded from Figure 3 to ensure clarity.

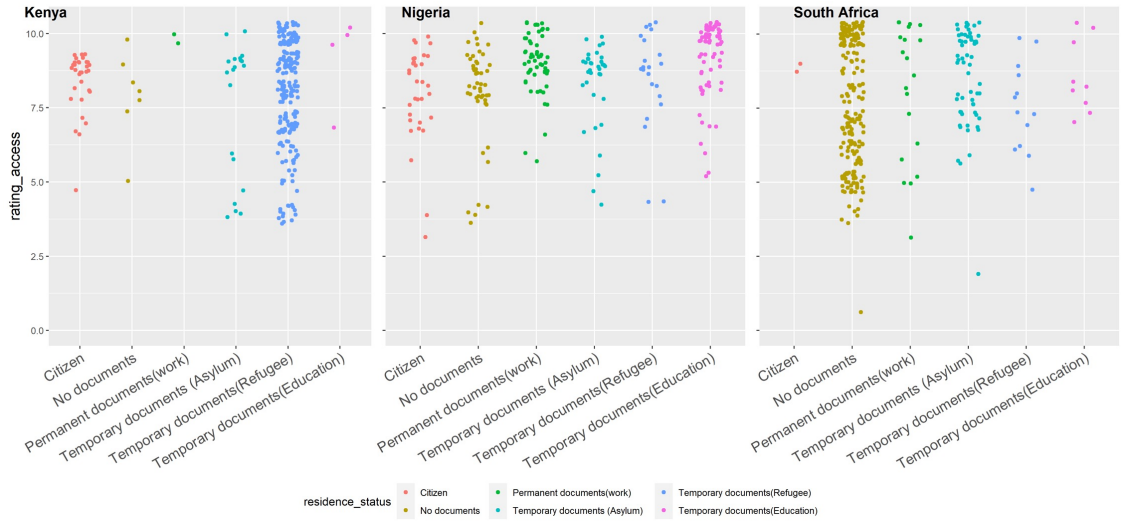

Figure 3: Scatterplot of rating of health access in Kenya, Nigeria and South Africa, grouped by documentation cohorts.

A consistent finding throughout the three sample countries is that self-assessed access for people without any documentation is lower than that of other groups, not only by means but also within the linear models. In particular the sample in South Africa, where undocumented migrants were targeted, the effects were almost 2 points lower in the linear model. In Kenya, refugees and asylum seekers rated their access lower than other groups by 0.4 and 0.8 points respectively. The effects remain similar in the linear model.

In Nigeria, refugees reported having greater access than citizens by 0.5 points and asylum seekers by 0.4 points, thus again having refugee status seems to have a slightly more positive effect than for those in the process of seeking asylum.

This was not the case in South Africa, where refugees rated their access as one of the lowest and asylum seekers rated it quite high, with a 1.1 point difference in health access when refugees are compared to asylum seekers. This may appear counterintuitive, as registered refugees, by virtue of their registration status, typically enjoy greater social coverage than those seeking asylum. However, one possible explanation for this is the set of expectations of improved access to healthcare and the extent to which these are met once registration has been granted.

If respondents had work permits or the right to work, their health access was generally rated high. In Nigeria, the health access of this cohort was the second highest after educational migrants – and significantly better than the four other groups. Although people with work visas in South Africa also described their access to health care as good, the effects here are not as strong and negative in the multivariate model.

However, the Kruskal-Wallis test indicates the groups do not rate their health access equal in Nigeria and South Africa. This result underlines the fact that having a certain residence status corresponds to a difference in access to health care, and that this effect was not caused by the differently distributed covariates. This cannot be said for Kenya, which did not show an effect for groups with more than ten respondents for the tests on different averages.

Discussion

The most consistent result across groups and models is that migrants without documentation have worse access than those with documents. This provides evidence for the disadvantage of this former group due to irregular or illegal residence status, which was anticipated in the literature, including in other world regions (Juarez et al 2019, Spitzer et al 2019). It also strongly suggests that extending regularization pathways in African states, even if on a temporary basis, would be an effective policy lever to improve migrants' access to healthcare, and by extension migrants' health.

Apart from this clear trend, other effects remain unclear across samples and models. There are many possible reasons for this:

Firstly, the survey targeted different groups across countries. Cohorts, therefore, resulted in different group sizes and may not be normally distributed covariates. Moreover, the data set used was not originally designed for this type of examination.

Perhaps this is most evident with regards to employment and occupation status: because being self-employed or even unemployed can sometimes be the result of a conscious choice, which in turn has an impact, depending on residence status. This could explain the effects of the regression model. In South Africa, where we focused mostly on irregular migrants, for this group of people any form of employment has a positive effect on health care, because they become financially independent or would otherwise fall through the safety net. In Kenya and Nigeria, refugees and labour migrants are already within the safety net, but employment conditions often include precarious working conditions and obligations that make access to health care more difficult. This would be reflected in the negative coefficients, but further research is required to clarify the relationship between migrants' occupation and health status.

Secondly, the contexts of the countries and groups studied were diverse, which leads to variable overall health care access. Examples of this can include language differences in neighbouring countries, nationality, travelling alone or in a group, network at the new location of residence and many more. In order to mitigate this heterogeneity, we applied intra-country comparison only. However, responses like part-time work or full-time work may have different meanings and implications in different settings. For example, it is not known how safe the working environment is, or if people consciously choose a reduction of working time, then this may be an indication of precarious employment conditions.

Thirdly, potential answers may not have been sufficiently distinct. Self-employment and full-time work are not exclusive to one another. Evidence that people did not always know where to categorize themselves is provided by the absolute numbers of answers to the question of occupation status 'student' compared to the residence status 'education': In Kenya, the difference was 8 responses, in Nigeria, 13 and South Africa, 5. Potentially, people obtain educational residence status but work part-time, thus categorizing themselves differently. While this is a common issue with surveys, a clearer distinction or explanation could have mitigated the effects. Potentially, this also explains why documentation has the most consistent findings, as no documents vs. some documents could be seen as a very clear cut.

Fourthly, one may criticize that self-rated health access is not adequate to identify actual health access. Waiting times to see the doctor were reported by some key informant interviewees and survey respondents as worse for migrants, and this should be the subject of further research. Nevertheless, a rating scheme is normally easy to understand, and corresponds to the subjective feeling of migrants, thus taking into account their perception of integration. Further, it allows for numeric comparisons within groups, for which the literature still lacks evidence in many regards.

Fifthly, data collection was affected by the social-distance measurements of the COVID-19 pandemic., This also potentially introduced some sample bias as a result. Consequently, the nonparametric Kruskal-Wallis was used additionally to check for differences in the groups. Here the Kenyan sample, unlike in the other models, did not seem to differ. A possible explanation could be due to the data collection process: in Kenya, the respondents mostly completed the surveys in the Eastleigh Health Centre in Nairobi. As this institution delivers health services irrespective of status and does not charge money or require documentation, the sample may not be representative of the entire migrant population throughout the country, especially since most refugees live in the two camps of Dadaab and Kakuma, which are situated in rural border areas of the country. Overall, in all three, countries the data collection was conducted in urban hubs mostly, thus representativity may suffer because of this.

Despite the named weaknesses and unclear effects within the groups, this paper still provides evidence of existing differences between different cohorts. From this, we can deduce that the groups should experience different measures for the elimination of disadvantage. Or even that the disadvantage itself, like no documentation status, should be eliminated. This evidence enlarges the foundation for discussion of means to improve the health status of migrants.

Based on these findings, we make the following recommendations for African Union Member States, Regional Economic Communities, and the AUC:

- Pathways to regularization for migrants in African Union Member States should be introduced or extended. Governments should consider implementing temporary registrations and amnesties during the current COVID-19 pandemic.
- Enabling greater economic participation for migrants in settlement countries promises to improve their health access and health outcomes
- Strengthen workplace protection for migrants, including ensuring that all staff, including migrants, have access to health insurance schemes.
- Health systems in AU MS should consider the benefits of more mixed, integrated healthcare provision for migrants and local citizens, instead of treating them separately.
- Improve data collection on migrants' health and occupation, and conduct more research, including longitudinal studies assessing migrant's health status pre-departure, upon arrival, and post-arrival, for which a forthcoming policy brief of the AUC will provide recommendations for action ("Multidimensional approaches towards migrants health")
- The existing guidelines to enhance migration and health governance, such as SDG 10.7, the Migration Policy Framework for Africa, African Health Strategy and Agenda 2063 shall be used

Conclusion

Certain manifestations of gender, occupation and residence status can result in higher or lower health access for migrants. Clear negative effects are evident for non-documented migrants, while other impacts of other characteristics remain ambiguous. However, several tests verified, that health access is different among the groups investigated in the survey.

There are various policy levers that African policymakers can use to improve migrants' access to health, including national social coverage or health insurance schemes. However, most such schemes are restricted to documented migrants and refugees. Whilst it may be politically challenging for African states to provide long-term registration status to irregular migrants, there are various options for extending registration status on a temporary basis. These include temporary and short-term registration, for example on public health grounds, as well as time-limited amnesties for undocumented migrants.

Our findings suggest that the linkages between migrants' occupation and health access in African states are less clear, and require further research. However, there is also a strong case for increasing irregular migrants' economic participation - for example by providing the right to work or own businesses - in order to increase their ability to pay for health care and medicine, as well as to contribute to government revenues through taxation and minimise inequalities.

In the African context, measures such as these will help to achieve delivery of the African Union's Agenda 2063, which aims to increase regional and continental integration to improve prosperity and livelihoods for African citizens. In global contexts, such steps are also important for achieving SDG targets but also for realizing the ambition of Article 25 of the Universal Declaration of Human Rights (UN Assembly 1948), which defines adequate access to health and social determinants of well-being as a human right.

Finally, at a time of the global COVID-19 pandemic, it is worth stressing that enhanced access to healthcare for vulnerable groups of migrants, also promises to benefit the health of the broader population as a whole.

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Appendix

Appendix 1: Categories of migrants

Migrant category	Definition
International migrants	Individuals who remain outside their usual country of residence for at least one year (UNDESA)
International labour migrants	Individuals engaged in remunerated activity in a state of which he/she is not a national, including persons legally admitted as a migrant for employment (ILO)
Irregular / undocumented migrants (sometimes also referred to as "illegal migrants")	Individuals who enter a country, often in search of employment or other opportunities, without the required documents or permits or who overstay the authorised length of stay in the country (UN Population Division) *There are few reliable data sources on numbers of irregular migrants
People in refugee-like situations	Similar to refugees below, but this category is broader as it includes people who have been forced to leave their country of origin but who lack legal status as refugees and who have not registered claims for asylum. Typically, this latter group are irregular migrants (UNHCR) In this report, 'people in refugee-like situations' is used as an umbrella term that includes registered/ legal refugees, asylum-seekers, and irregular migrants who have been forced to flee their country of origin. *There are few reliable data sources on this broader category
Refugees	Individuals who, owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion, are outside of the country of their nationality and are unable to, or owing to such fear are unwilling to, avail themselves of the protection of that country, or return because of fear of persecution (UNHCR) The term refugee is typically used in a precise legal sense – i.e. someone who has been granted legal status as a refugee – as well as in a broader, more abstract sense.
Asylum seekers	Individuals who have sought international protection and whose claims for refugee status have not been determined (UNHCR)

(Source: Adapted from Zimmerman et al (2011))

Appendix 2: Multicollinearity

Multicollinearity within the independent variables is checked by a variation inflation factor (vif) and describes how much the variables correlate. If it is detected, the linear model suffers large variances and its estimators shall be used cautiously only (Mansfield and Helms 1982). A rule of thumb is that the vif factor should be below 5, which is introduced by Hair et al (2010).

In our datasets, for all factors, this is the case. However, In the Nigerian sample residence status and occupational status are approximately 4, which suggests a moderate collinearity and consequently results from the linear model created for Nigeria should be used more cautiously.

Table 2: Variance inflation factor

Variance inflation factor / degrees of freedom (df)			
	Kenya	**Nigeria**	**South Africa**
Gender	1.091133 / 1	1.083923 / 1	1.051230 / 1
Residence Status	2.641129 / 6	4.032341 / 6	1.452490 / 6
Occupation	2.538441 / 6	4.048248 / 7	1.499908 / 5

Appendix 3: Heteroskedasticity

The error terms of a linear model shall be distributed equally, to ensure to have the best unbiased efficient estimator. If heteroskedasticity is identified, hypothesis testing may be wrong as the prediction relies on some high variance observations, which is not optimal

Nevertheless, the estimator remains unbiased. A Breusch-Pagan test can be used to check the hypothesis if the error terms are uncorrelated (Breusch and Pagan 1979).

When we apply the Breusch Pagan test to the error terms of our data sets, we have to reject our hypothesis of uncorrelated error terms for the Nigerian sample, as the p-value is 0.014. Consequently, results from the linear model created for Nigeria should be used more cautiously. This is not the case for the data in Kenya and South Africa with p-values of 0.077 and 0.359 respectively.

Table 3: Breusch Pagan Test

Breusch Pagan Test			
	Kenya	**Nigeria**	**South Africa**
Breusch Pagan	20.802	27.953	13.143
df	13	14	12
p-value	0.07694	0.01443	0.3587

Appendix 4: Kruskal Wallis Test

The Kruskal Wallis test can be used to check if the medians of two or more groups are different from each other. As a non-parametric test, it can be implemented regardless of the distribution of the sample. This is important as not fully random data collection and heteroskedastic error terms of the Nigerian sample. The Kruskal Wallis test hypothesises that the mean ranks of the different factors are equal. If this is rejected the data provides evidence that outcome (health access) is unequal based on the factors (occupation and residence status).

Calculation of the Kruskal Wallis test reveals differences in South Africa and Nigeria in both categories. This is not the case for the data in Kenya.

Table 4: Kruskal Wallis Test

Kruskal Wallis Test						
	Kenya		**Nigeria**		**South Africa**	
	Occupation	**Residence**	**Occupation**	**Residence**	**Occupation**	**Residence**
Chi²	9.4883	7.7864	21.92	56.948	47.602	16.334
df	6	6	7	6	5	6
p-value	0.1479	0.2542	0.002622	1.871e-10	4.282e-09	0.01207

Appendix 5: Questionnaire

The data was generated by respondents who answered the following questions, which were part of a bigger health and migration studies.

What is your gender?

- ◯ Female
- ◯ Male
- ◯ Other
- ◯ Prefer not to say

What is your residence status in this country?

- ◯ Citizen
- ◯ Permanent documents (e.g. unlimited working permit, etc.)
- ◯ Temporary documents (Asylum seeker, e.g. asylum seeker certificate)
- ◯ Temporary documents (Recognized refugee, e.g. alien card)
- ◯ Temporary documents (Educational stay)
- ◯ No documents/ without legal documents (e.g. working permit or refugee status denied)
- ◯ Other (please specify):
- ◯ Prefer not to say

What is your current occupational situation:

- ◯ I work full-time
- ◯ I work part-time
- ◯ I am self-employed
- ◯ I work without a contract
- ◯ I am a student
- ◯ I am unemployed
- ◯ I am retired
- ◯ Other (please specify):

How do you rate the general quality and access of the health service provision where you currently live? *(10=excellent, to 1=inexistent)*	10	9	8	7	6	5	4	3	2	1
Access:	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯

African Union

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