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Inequality in the access to preventive health care: The case of immigrants in Belgium

by

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Abstract

Purpose: *to study differences in the access to preventive health services between Belgians and the two main groups of immigrants in Belgium, Moroccans and Turks, and the role of the general practitioner in promoting equal access to preventive care.*

Method: *comparing the proportion of persons aged 25 or above who were: (a) vaccinated for tetanus, influenza and rubella; (b) screened for cardiovascular risk factors; (c) screened for early detection of cancer of the breasts and the cervix; and (d) had HIV-related knowledge and screening. Data were taken from the Belgian Health Interview Survey 1997. The association between country of origin and access to preventive health care was examined controlling for confounding variables such as socioeconomic status and having a permanent general practitioner.*

Findings: *Native Belgians had better access to the preventive health services studied than did immigrants from Morocco and Turkey. Significant differences were observed for nine of the eleven dependent variables after*

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controlling for socio-demographic characteristics. Being registered with a permanent general practitioner increased access to most preventive technologies studied, but did not eliminate the differences between immigrants and native Belgians.

Conclusions: *although the majority of the Moroccan and Turk immigrants have been in Belgium for over two decades, they do not enjoy the same level of access to preventive technologies and knowledge as native Belgians do. Our findings indicate that general practitioners provided a limited range of preventive care. We conclude that intervention programs among general practitioners and other primary care providers as well as among immigrants are called for.*

Keywords

Belgium, general practitioner, immigrants, preventive care.

Introduction

The health status of immigrants has been extensively studied (1). Most of this research has shown that mortality patterns and the leading causes of death among immigrants change gradually over the years, and a transition takes place from homeland patterns to those which prevail in the host land. Research on immigrants' utilization of health services, however, has yielded inconclusive results, and research on the utilization of preventive care has focused mainly on women. The purpose of the present analysis was to expand this line of research by investigating the access of immigrants to preventive health care in Belgium.

Past research on patterns of utilization of health services has been inconclusive. In Israel, for example, high utilization rates have been observed among immigrants from Romania and the former USSR, but relatively low utilization has been observed among immigrants from Ethiopia (2-4). Klierwer and Butler (5) reported lower utilization rates among different groups of immigrants in Australia, but Reijneveld (6) showed that immigrants in Amsterdam used health services more frequently than did the host population. These differences, however, were largely explained by the relatively poor health status and living conditions of the immigrants.

This body of research thus suggests that the adoption of hostland patterns of health and illness behavior is related to the immigrants' socioeconomic characteristics, their degree of cultural isolation, and their expectations from the health care system (3, 7).

Unlike curative health services, preventive care does not meet any immediate health needs. Vaccinations, screening for early detection of cancer and cardiovascular risk factors do not treat life threatening or anxiety elevating conditions, nor do they affect the individual's present quality of life. It is this nature of preventive health that has raised special interest in the extent to which immigrants, ethnic minorities, and other disadvantaged social groups have differential access to, or make differential use of, preventive care.

The utilization of preventive health services by immigrants have been studied mainly among women. Often, underutilisation of Mother and Child Health services and screening for early detection of cancer of the female reproductive organs were observed (8-11). The degree to which the findings of this body of research can be generalized to other preventive technologies, however, is yet to be established.

The primary care provider, the general practitioner (GP), is an important health agent in a position to promote preventive care, or deny it. Health education and many preventive health technologies can be applied by the GP with the standard equipment of a common primary care clinic. Past research, however, has suggested that there is a considerable variation in the ways that GPs perceive their professional role, and that the provision of health care does not necessarily follow a universalistic code of ethics. Biderman et al (12), for example, showed that specialists in family medicine tended to take responsibility for a wider scope of conditions and procedures than non-specialist primary care physicians. The degree to which GPs promote preventive health care could thus be the result of the way they perceive their role.

Past research has also indicated, however, that extra-professional social attitudes do penetrate into professional practice, and that medical decisions are not independent of patients' social characteristics. Thus, for example, GPs in various European countries have been found to be less likely to order diagnostic tests for working class patients, spent less time with them, and referred fewer of them to specialized consultations (13-16). There is thus a very real possibility that disadvantaged social groups, such as ethnic minorities and immigrants, are provided with less preventive care than are native patients.

The following analysis will address these issues by focussing on two groups of immigrants in Belgium: Moroccans and Turks. The immigration from Turkey and Morocco to Belgium started at the early 1960s, as contract labour, to meet the growing needs of heavy industry and mines. This first wave lasted for about a decade. During the 1970s, immigration from these countries was largely due to family reunion, and from the 1980s on most of the recent immigrants from Morocco and Turkey have been imported spouses. Both groups are largely characterized by low socioeconomic status, in terms of education, income, and unemployment rates (for a full description of the history and the social characteristics of the immigrants from these two countries, see e.g. 17).

Methods

Data were taken from the National Health Interview Survey conducted in Belgium during 1997. A multi-stage stratified sampling procedure was employed to ensure, as much as possible, a representative sample of the Belgian population (18). The data were collected from sampled households by means of closed interviews and a written questionnaires. Up to four persons in each household were included in the study whenever possible. The head of the household was personally interviewed, his/her spouse and two of the children living in the household filled a self-administered questionnaire if possible. When language difficulties interfered with data collection from immigrants, an adult (over 15 years of age) household member who had mastered one of the three formal languages helped with the interpretation.

For the purpose of the present study, data collected from adults, 25 years of age or more, will be analysed. Complete data were available for 6,217 native Belgians, 234 Moroccan, and 75 Turkish adult immigrants. The following variables will be analysed:

(I) The dependent variable, access to preventive health care, will be examined using the following measures:

(1) vaccinations: the proportion of immigrants and native Belgians who were vaccinated for three conditions, representing differential needs over the life-cycle: Tetanus, recommended for all age-sex groups; influenza, recommended mainly for the elderly; and rubella, which is particularly important for women of reproductive age.

(2) screening for CVD risk factors and reproductive cancer: the proportion of native Belgians and immigrants who had undergone screening for early detection of four conditions will be compared: blood-pressure, cholesterol, breast cancer, and cancer of the cervix.

(3) HIV knowledge and diagnosis: the degree to which the host-society shares the available HIV knowledge with immigrants from Morocco and Turkey will be examined by looking at the proportion of respondents in each sub-population who are familiar with the HIV-risk in blood-transfusion, non-contaminating factors, and the behaviour which sufficiently protects against HIV contamination. The proportion of persons who had taken HIV diagnostic blood test will also be compared.

(II) The independent variable in the analysis is a dichotomous variable, immigrant from Morocco or Turkey (1) and native Belgian (0). Ethnicity was defined by country of birth or nationality. In case of inconsistency, respondents were classified as non-Belgian. All other immigrants and ethnic groups were excluded from the analyses.

(III) explanatory variables:

(1) socio-demographic characteristics: age and sex;
(2) indicators of social integration: participation in the labour force;
(3) Socio-economic status: level of education and monthly income;
(4) access to health services: four variables will be considered: having a fixed GP, GP and specialist visit during the two months prior to the interview, and hospitalization during the year before the survey.

Mode of analysis

In the first step, bivariate analyses will be conducted. Then, a multiple logistic regression equation will be used to estimate the degree to which socio-demographic and socioeconomic characteristics explain differences in the utilization of, or access to, preventive care between immigrants and native Belgians. Finally, the role of the GP will be examined by introducing an interaction between migration status and having a fixed GP into the logistic regression equations. Sampling weights were not included in the analysis, as our main purpose was to explore the statistical effect of belonging to the social category of immigrants controlling for the four explanatory variables, rather than in assessing the precise distribution in Belgium.

Results

The examination of the socio-demographic and the socio-economic characteristics of native Belgians, and of immigrants from Morocco and Turkey enabled us to combine the two groups of immigrants into one category (Table 1). The social characteristics of the migrants from Morocco and Turkey were not significantly different from each other, but these two groups differed significantly from the native Belgians. Immigrants from both countries were younger, obtained less education, fewer men and women immigrants were employed, and there was a large income discrepancy between immigrants and native Belgians. Their younger age of the immigrants in this representative sample of the population, for instance, reflected the higher fertility rates of Moroccans and Turks. The differences in education attainment persisted after controlling for age and sex, indicating that the differential access to education persisted long after the first wave of contracted labour migration.

Although all participants had medical insurance coverage, fewer immigrants than native Belgians were registered with a fixed GP, and fewer visited a GP during the two months prior to the interview (Table 2a). Age, sex, level of education, and employment were all significantly associated with access to primary care, but none of these could account for the differences between immigrants and Belgians (Table 2b). No significant differences were observed, however, regarding the utilization of specialized consultants and hospital services.

We now turn to explore whether immigrants had less access to preventive health care than native Belgians, and whether these differences can be explained by socioeconomic characteristics. Bivariate and multi variate analyses, comparing the proportion of immigrants and Belgians who received each of the three immunizations under study, are presented in Tables 3a and 3b. Only anti-tetanus vaccination was similarly distributed among immigrants and Belgians. Immigrants were significantly less likely to be immunized against influenza and rubella. These differences persisted after controlling for sex, age[1], and SES.

Being registered with a fixed general practitioner increased the odds of receiving the anti-influenza vaccine, but not the probability of being immunized against rubella or tetanus. Yet, there was no indication that GPs treated immigrants and Belgians differentially (adding an interaction

[1] In the present analysis, age was employed as a continuous variable. In a previous analysis (20), the same patterns were observed within each of the four age groups analyzed.

TABLE 1

Sociodemographic and Socioeconomic Characteristics of Immigrants and Native Belgians (percent, means, and standard deviations)

	Belgians (n = 6217)	Moroccans (n = 234)	Turks (n = 75)	Total (n = 6526)	Statistics
Sex (% men)	47.9	53.6	55.4	48	$\chi^2 = 4.1$
Age mean	51.0	41.7	38.3	50.5	F = 50.2**
S.D.	(17.0)	(12.5)	(13.1)	(16.9)	
Highest diploma (%)					
No diploma	1.4	26.5	10.8	2.3	$\chi^2 = 750.2$**
Primary	14.5	32.4	44.6	15.4	
Inferior secondary	19.1	12.8	13.8	18.8	
Superior secondary	29.9	18.3	24.6	29.5	
Higher education	35.1	10.0	6.2	34.0	
Labor force participation (% employed)					
Men	59.4	47.3	51.5	58.8	$\chi^2 = 10.3$*
Women	40.9	15.9	28.6	40.0	$\chi^2 = 30.8$**
Monthly income mean	43,428.9	30,669.1	32,100.0	42,909.3	F = 30.4**
S.D.	(24,699.8)	(15,948.5)	(15,934.9)	(24,522.6)	

* P < .05

** P < .001

TABLE 2a
Utilization of health services of native Belgians and immigrants (percent)

	Belgians (n = 6217)	Immigrants (n = 309)	Total (n = 6526)	Statistics
Fixed general practitioner (% have)	92.3	77.7	91.6	$\chi^2 = 79.4$*
General practitioner visit last two months (% visited)	48.8	32.3	48.0	$\chi^2 = 30.7$*
Specialist visit last two months (% visited)	22.8	21.9	22.7	$\chi^2 = 0.1$
Hospitalization past year (% hospitalized)	12.5	10.7	12.5	$\chi^2 = 1.3$

* P < .001

TABLE 2b
The Odds of Utilization of Health Services by Social Characteristics (Odd ratios extracted from logistic regression analyses)

	Fixed general practitioner	General practitioner contact last two months	Specialist contact last two months	Hospitalization past year
Moroccans and Turks (vs Belgians)	**0.25*****	**0.82*****	**1.16**	**0.73**
Sex (women vs men)	1.55***	1.56***	1.74***	1.30***
Age	1.02***	1.03***	1.00	1.01*
Currently employed (vs unemployed)	1.38**	0.78***	0.55***	0.57***
Level of education	0.77***	0.86***	1.11***	0.88***
Monthly income	1.00	1.00	1.00**	1.00
Has a fixed general practitioner (vs does not)		5.54***	0.98	1.10

* P < .05
** P < .01
*** P < .001

TABLE 3a

Vaccination among Belgians and Immigrants (percent immunized)

	Belgians (n = 6217)	Immigrants (n = 309)	Total (n = 6526)	Statistics
Tetanus in the last ten years	63.1	65.2	63.2	$\chi^2 = 0.8$
Influenza in the past year	20.2	6.4	19.6	$\chi^2 = 34.4$*
Rubella (women only)	66.4	46.8	65.4	$\chi^2 = 12.7$*

* P < .001

TABLE 3b

The Odds of Receiving Three Vaccinations by Social Characteristics (odd ratios extracted from logistic regression analyses)

	Tetanus in the last ten years	Influenza in the past year	Rubella (women only)
Moroccans and Turks (vs Belgians)	**0.92**	**0.54***	**0.45****
Sex (women vs men)	0.55***	1.04	
Age	0.97***	1.06***	0.96***
Currently employed (vs unemployed)	1.29*	0.67***	1.14
Level of education	1.11***	0.99	0.99
Monthly income	1.00	1.00	1.00
Has a fixed general practitioner (vs does not)	1.15	2.51***	1.21

* P < .05
**P < .01
***P < .001

term between immigrant status and having a permanent GP was not significant).

Fewer immigrants had undergone screening for cardio- and cerebrovascular risk factors and for early detection of cancer (Tables 4a and 4b). Socio-demographic and socio-economic characteristics did not explain the differences between the immigrants from Morocco and Turkey and the native Belgians. Three of the differences observed in the bi-variate analyses remained statistically significant at $P < .001$ level, the access to clinical examination of the breasts dropped to $P < .10$. Still, the probability of an immigrant woman having undergone clinical screening for early detection of breast cancer were 40% (odds ratio = 0.65) that of a Belgian woman of the same age, education, income, and employment status.

Having a fixed GP significantly increased the odds of screening for cardiovascular risk factors and for early detection of breast cancer, but not for early detection of cancer of the cervix. At the same time, the contribution of the GP did not compensate for the differences between Belgians and immigrants(Table 4b, model I). Moreover, it appears that immigrants registered with a permanent GP do not necessarily have better access to preventive care (Table 4b, model II). Note that including an interaction term between migrant status and having a fixed GP in the regression equations did not change the odds for cholesterol control and for early detection of cervical cancer. Women of Moroccan and Turkish origin who were registered with a permanent GP were indeed far more likely to have undergone clinical examination of the breasts, but GPs tended to monitor the blood pressure of these immigrants *less often*.

The data set allowed us to examine the degree to which immigrants shared the health related knowledge available in the host society only with regard to HIV. Bi-variate analyses clearly showed an unequal access to that knowledge (Table 5a). A significantly higher proportion of Belgians were well informed about HIV transmission and prevention, and more of them underwent diagnostic blood tests than immigrants. The differences in the socio-demographic and socio-economic characteristics between these two groups accounted for the differences in knowledge of the HIV risk involved in blood transfusion only (Table 5b). The differences in knowledge of non-contaminating factors, familiarity with the means of sufficient HIV protection, and access to diagnostic tests, however, persisted after controlling for social and demographic characteristics.

Having a permanent GP was not related to any of the HIV knowledge variables, and was *negatively* associated with performing diagnostic blood test. There was no significant interaction between HIV related knowledge and screening, migration status, and having a permanent GP.

TABLE 4a

Access to Medical Screening of Belgians and Immigrants (percent screened)

	Belgians (n = 6217)	Immigrants (n = 309)	Total (n = 6526)	Statistics
Blood pressure control – past 5 years	94.3	73.4	93.5	$\chi^2 = 162.7$*
Cholesterol control – past 5 years	67.1	29.2	65.5	$\chi^2 = 142.1$*
Clinical breast examination – past 2 years (women only)	55.9	38.2	55.3	$\chi^2 = 13.5$*
Cervix examination – past 3 years (women only)	58.4	34.0	57.6	$\chi^2 = 25.0$*

*P < .001

TABLE 4b

Access to Screening by Social Characteristics (odd ratios extracted from logistic regressions analyses)

	Blood pressure control – past 5 years		Cholesterol control – past 5 years		Clinical breast examination – past 2 years (women only)		Cervix examination – past 3 years (women only)	
	Model I	Model II	Model I	Model II	Model I	Model II	Model I	Model II
Moroccans and Turks (vs Belgians)	**0.31*** **	**0.55***	**0.37*** **	**0.35*** **	**0.65+**	**0.21****	**0.44*** **	**0.24***
Sex (women vs men)	2.10***	2.11***	1.37***	1.37***				
Age	1.04***	1.04***	1.05***	1.05***	0.98***	0.99**	0.98***	0.98***
Currently employed (vs unemployed)	1.15	1.16	0.89	0.89	1.00	0.99	1.32**	1.31**
Level of education	1.13*	1.13*	1.07*	1.08*	1.39***	1.40***	1.45***	1.45***
Monthly income	1.00	1.00	1.00***	1.00***	1.00*	1.00*	1.00	1.00
Has a fixed general practitioner (vs does not)	2.52***	2.84***	1.82***	1.82***	1.62**	1.47*	1.00	0.93
Interaction (GP * immigrants)		0.47*		1.07		4.09**		2.18

+ P < .10
* P < .05
** P < .01
*** P < .001

TABLE 5a

Accessibility of Belgians and Moroccans and Turkish Immigrants to Hiv Related Knowledge and Tests (percents)

	Belgians (n = 6217)	Immigrants (n = 309)	Total (n = 6526)	Statistics
Correct knowledge re the risk in blood transfusion (%)	29.5	17.3	29.0	$\chi^2 = 17.8^{**}$
Correct knowledge re non-contamination (%)	53.6	37.8	38.0	$\chi^2 = 24.1^{**}$
Correct knowledge re non-sufficient protection (%)	49.5	25.4	48.5	$\chi^2 = 56.1^{**}$
Had undergone an HIV test (%)	23.1	17.4	22.9	$\chi^2 = 4.4^{*}$

* P < .05
** P < .001

TABLE 5b

Hiv Knowledge and Screening by Social Characteristics (Odd ratios extracted from logistic regression analyses)

	Correct knowledge re the risk in blood transfusion	Correct knowledge re non-contamination	Correct knowledge re non-sufficient protection	Had undergone an HIV test
Moroccans and Turks (vs Belgians)	**0.8**	**0.63****	**0.45*****	**0.66***
Sex (women vs men)	0.85*	0.94	1.10	1.34***
Age	0.98*	0.98***	0.97***	0.96***
Currently employed (vs unemployed)	1.29**	1.18*	1.14	1.10
Level of education	1.39***	1.31***	1.45***	1.22***
Monthly income	1.00*	1.00**	1.00***	1.00***
Has a fixed general practitioner (vs does not)	1.02	0.96	0.88	0.76*

*P < .05
**P < .01
***P < .001

Discussion

This study examined the access of immigrants from Morocco and Turkey to preventive health care in Belgium, and the role of the GP in promoting equal access to this aspect of health. We approached these questions by analyzing data from the National Health Interview Survey, conducted in Belgium in 1997. Eight preventive technologies and three measures of health education were examined. To all of these but two (anti-tetanus vaccination and knowledge of the HIV risk in blood transfusion) immigrants had significantly and substantively less access.

As shown here and in previous studies, the access of immigrants who came to Belgium from Morocco and Turkey to social goods and resources, such as education, employment, and average income is limited compared with that of their native Belgian counterparts. These observations indicated that immigrants from Morocco and Turkey were not successfully integrated into Belgian society. These two groups of immigrants also have less access to health resources, and in particular to primary and preventive care.

In this study, fewer immigrants than natives were registered with a permanent GP, and fewer of them consumed primary care services than natives. Yet, there were no differences in the utilization of specialized consultant and hospital services. These observations could suggest that immigrants tended not to seek help for conditions culturally defined as unthreatening, limited dis-eases. Alternatively, however, these findings can be interpreted in terms of social integration, the perceived access to, and the legitimacy of using, health services. A durable, chronic, condition or threatening illness justified seeking the help of a specialist or of a hospital. Preventive services, by their nature, do not meet these criteria. Indeed, of the eight preventive technologies and three health education items examined in this analysis, nine were reported significantly less often among Moroccan and Turkish immigrants than among native Belgians of the same age, sex, and socioeconomic characteristics.

As has been reported in previous research, we observed inequality in access to health technologies of other disadvantaged social groups, and not only of immigrants. Accessibility to preventive technologies and health knowledge was adversely associated with age (except for immunization against influenza), positively related to level of education, and, though to a lesser degree, to income and current participation in the labor force. We also found (cf. 19) that having a permanent GP generally increased the odds of access to preventive care.

Two observations should concern public health policy makers. First, although there was no indication of discrimination *against* immigrants,

positive discrimination was also not found. Positive discrimination can, at least partially, overcome inequality in access to health resources, including knowledge and technologies. Second, judging by the consumers' reports, GPs were unlikely to promote preventive technologies which are not directly related to primary medical care provision. Thus, while participants who had a permanent GP were 2.5 times more likely to receive influenza vaccination, recommended for the elderly and for the chronically ill, they had equal odds as subjects not registered with a permanent GP to be inoculated for anti-tetanus or rubella, which are under the responsibility of the public health and MCH. Similarly, having a fixed GP increased the odds of screening for hypertension, lipids, and breast cancer, but not for cancer of the cervix, screening usually performed by gynecologists. It appears that GPs do not provide HIV education, not even practical advice regarding preventive behaviour, and certainly do not promote diagnostic blood tests. It should be noted that similar results were obtained when the permanent GP variable was replaced by visits to the GP during the two months prior to the interview (not shown).

Conclusions

It is in the power of a society to increase equality and ease the access to health and health care of immigrants as well as of other disadvantaged social groups. Belgian society offers a universal health insurance coverage, but this in itself does not appear to be sufficient to achieve equal access to preventive care. The GP could be a key agent in promoting preventive care and lessening unequal access to it. Currently, GPs seem to define their preventive care responsibilities in a rather limited, non-comprehensive, manner, and to be indifferent to this aspect of social inequality. It is strongly suggested that policy makers initiate intervention programs among providers of primary care, emphasizing the importance of their possible contribution to the promotion of all aspects of preventive health care, and in the reduction of social inequalities. This should be accompanied by health education intervention among immigrants which also aims at increasing registration with a permanent GP.

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