



Demographic Research a free, expedited, online journal
of peer-reviewed research and commentary
in the population sciences published by the
Max Planck Institute for Demographic Research
Konrad-Zuse Str. 1, D-18057 Rostock · GERMANY
www.demographic-research.org

DEMOGRAPHIC RESEARCH

VOLUME 24, ARTICLE 32, PAGES 801-824
PUBLISHED 07 JUNE 2011

<http://www.demographic-research.org/Volumes/Vol24/32/>

DOI: 10.4054/DemRes.2011.24.32

Research Article

Does nativity matter? Correlates of immigrant health by generation in the Russian Federation

Cynthia J. Buckley

Erin Trouth Hofmann

Yuka Minagawa

© 2011 Buckley, Hofmann & Minagawa.

This open-access work is published under the terms of the Creative Commons Attribution NonCommercial License 2.0 Germany, which permits use, reproduction & distribution in any medium for non-commercial purposes, provided the original author(s) and source are given credit.

See <http://creativecommons.org/licenses/by-nc/2.0/de/>

Table of Contents

1	Introduction	802
2	Nativity and health	802
3	Migration and health in Russia	804
4	Methods	806
5	Results	808
6	Discussion and conclusions	818
7	Acknowledgements	819
	References	820

Does nativity matter? Correlates of immigrant health by generation in the Russian Federation

Cynthia J. Buckley¹

Erin Trough Hofmann²

Yuka Minagawa³

Abstract

The Russian Federation has experienced simultaneous declines in health and rises in international migration. Guided by the “healthy migrant effect” found elsewhere, we examine two questions. First, do the foreign-born in the Russian Federation exhibit better overall health than the native-born? Second, to the extent positive health selectivity exists, is it transferred to the second generation? Using the first wave of the Russian Generations and Gender Survey, our findings support the idea of positive health selection among international migrants from non-Slavic regions. The effect of migrant status, regardless of origin, diminishes when age, sex, and native language are taken into account.

¹ Program Director, please direct correspondence to: Social Science Research Council. One Pierrepont Plaza, Brooklyn NY 11201, USA. Fellow, IC2 Institute, University of Texas, Austin. Phone: 512 517 9241. Fax: 212 377 2727. E-mail: buckley@ssrc.org.

² Ph.D. Candidate. The University of Texas, Austin. E-mail: ehofmann@prc.utexas.edu.

³ Graduate Student. The University of Texas, Austin. E-mail: yuminagawa@prc.utexas.edu.

1. Introduction

Immigrant populations often experience better health profiles than native populations in destination countries. Research findings, heavily reliant upon studies within the North American migration system, clearly document an immigrant health advantage. This advantage often declines with increased duration of residence; typically disappearing, or even reversing, among second-generation migrants. The underlying factors generating this health advantage have been attributed to both positive health selectivity and better health behaviors among immigrants in comparison to the native-born. The decline of immigrant health advantage over time has been linked to the effects of cumulative discrimination and negative assimilation.

Few studies address the links between migration and health status in the Russian Federation, a country second only to the United States in terms of the number of current residents born outside its borders (Mansoor and Quillin 2006). Russia provides a valuable case for the examination of the positive health habits of immigrants relative to the native-born, and whether an “immigrant health advantage” is maintained across generations. The Russian Federation has experienced both a decline in population health and an increase in migration since 1991. Recently, anti-immigrant attitudes have risen. The widespread negative health behaviors within the Russian Federation and the economic and social isolation faced by migrants may make the Russian Federation an example of a “toxic” destination culture, increasing the likelihood of an immigrant health advantage.

Do the foreign-born in the Russian Federation experience better overall health than the native-born? To the extent health selectivity exists, is selectivity also observed among the second generation? Investigating these two questions will test and clarify existing theories on immigrant health advantages and approaches to second-generation immigrant health assimilation in the Russian case. Integrating the Russian experience into studies of nativity and health provides unique opportunities for both theory testing and for the injection of data-driven evidence into contentious policy debates.

2. Nativity and health

Research in a variety of destination countries demonstrates that immigrants enjoy significant health advantages in comparison to the native-born population—a phenomenon termed the “healthy migrant effect” (Antecol and Bedard 2006). Immigrants experience better self-assessed health, lower rates of many serious diseases, and lower risks of mortality than their native-born counterparts (Cho et al. 2004; Uretsky and Mathiesen 2007). The health advantage that immigrants enjoy can be

explained, in part, by health behaviors, as immigrants are less likely than natives to smoke, to drink, or to be overweight (Abraído-Lanza, Chao, and Flórez 2005; Cho et al. 2004; Yang and Martínez 2006). Positive immigrant health behaviors are reinforced by stronger social support systems among the foreign-born in comparison to the native-born (Marmot and Syme 1976; Vega and Amaro 1994), although access to social support has been shown to vary across immigrant generations (Rumbaut and Portes 2001). The healthy migrant effect in the first generation is also associated with selectivity: people who choose to migrate are often in better-than-average health (Landale, Oropesa, and Gorman 2000). While the healthy migrant effect is well-documented in the U.S., examinations in other settings generate contradictory findings. For instance, Solé-Auró and Crimmins (2008) find that older immigrants (age 50+) across 11 European countries are significantly less healthy than their native-born counterparts.

In countries displaying a healthy migrant effect, many previous studies show that the health advantage declines over time, reflecting the process of negative assimilation (Akresh 2007; Finch et al. 2009). Efforts to maintain origin identity and cultural practices can help maintain health advantages of immigrants. Renzaho and colleagues find that children of African immigrants in Australia exhibit lower rates of obesity than the native-born (Renzaho, Swinburn, and Burns 2008), similar to the findings of Parsons and colleagues among Muslims in the United Kingdom (Parsons et al. 1999).

In addition to nativity and duration, several socio-demographic factors influence immigrants' health status, including demographic characteristics, such as age and sex. Physical and cognitive conditions decline with age, and men tend to report better health statuses than women (Barrett and Buckley 2009). Men are more likely to engage in risky health behaviors such as smoking and drinking (Coutenay 2000; Deeks et al. 2009). In spite of men's unhealthy lifestyles, women often report worse self-assessed health and suffer higher rates of morbidity over the life course (Green and Pope 1999). Socioeconomic resources also affect health practices and outcomes. Poor health among immigrants is often related to their low socioeconomic status, as Hodge and colleagues (2004) observe among Greek and Italian immigrants in Australia. Low levels of physical and emotional well-being among immigrant adolescents in Spain are related to disadvantages in both socioeconomic status and social support (Pantzer et al. 2006). Overall, socioeconomic disadvantages and discrimination experienced by immigrants seemingly have negative impacts on their physical and psychological well-being.

3. Migration and health in Russia

The issue of immigrant health in the Russian Federation is particularly salient because Russia is experiencing simultaneous high levels of immigration and an ongoing national health crisis (Cockerham 1997, 2000). Recent reports stress the link between declining health, particularly among working aged men, and the culturally embedded practices of a variety of negative health behaviors in Russia, especially drinking (Jürgen and Room 2009). Rates of tobacco use are also very high in Russia (Perlman et al. 2007). Economic difficulties and lower educational status appear to increase these negative practices (Perlman 2010; Tomkins et al. 2007).

Improving population health and increasing life expectancy is a high priority for the Russian government (Smol'iakova 2009), but little attention has been paid to the potential role that immigrants could play in this. In our review of published literature we found no studies systematically examining the health of the foreign-born in Russia based on a nationally representative sample. Extant research focuses on the health risks that specific immigrant groups face in Russia (Weine, Bahromov, and Mirzoev 2008) or the risks that they bring into Russia, such as tuberculosis (Dzhatoeva 2010). In a context of rising xenophobia and growing ultra-nationalist movements, immigrants are portrayed in the media as political and social threats (Reuters 2009). Immigrants are also painted as a health threat, lacking basic immunizations and possessing high rates of infectious disease (Dzhatoeva 2010; Osadchuk 2007; Zurabov 2007). A 2003 government resolution (No. 188) required that all foreigners seeking to remain in Russia for greater than three months be tested for HIV, STIs, and tuberculosis.

Despite these negative portrayals, there are reasons to believe that immigrants to the Russian Federation experience a health advantage over natives. The majority of international migrants to Russia come from republics of the former Soviet Union: major sending countries include Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Ukraine, and Uzbekistan. While declines in life expectancy occurred across the former Soviet countries after 1991, the Russian Federation has experienced the most serious declines, followed by the culturally similar countries of Ukraine and Belarus (Cockerham et al. 2006). Negative health behaviors are more prevalent in Russia than in the other former Soviet states. For instance, per capita alcohol consumption in most sending countries (save wine-producing Moldova) is less than six liters per year (less than 60% of consumption in Russia). The percentage of smokers in sending countries ranges from 25 to 60% among men, compared to 70% of men in Russia (WHO 2008).

With negative health outcomes associated with culturally common behaviors in the Russian Federation, immigrants should tend to exhibit better health indicators than the native-born population. However, three factors may mitigate a Russian healthy migrant

effect. First, the post-colonial nature of the Eurasian migration system may generate a migration stream into Russia that is less selective on health. The shared cultural space of the Soviet Union homogenized regional differences in social norms, creating similar health-related behaviors across the countries of the former Soviet Union. Culturally, previous studies of Soviet society have highlighted the strong influence of Russian linguistic, religious, educational, and social norms across the Soviet Union (Anderson and Silver 1990), even seeping into the culturally distinct areas of Central Asia (Kandiyoti 2002). This shared Soviet past may mitigate the social distance between immigrants from the former Soviet Union and the native-born in Russia, dampening any healthy migrant effect.

Second, many of the foreign-born in the Russian Federation are ethnic Russians, or of culturally similar Slavic ethnicity (Ukrainians, Belorussians) (Heleniak 2008). Sharing cultural practices with the destination population, these foreign-born are unlikely to exhibit the health-protective behaviors underlying the healthy migrant effect. Finally, as previous studies of migrant health selectivity focus on economic migrants, the large number of migrants into the Russian Federation driven entirely, or in part, by political motivations may negate any healthy migrant effect. Between 1991 and 2001 all citizens of the Commonwealth of Independent States (CIS) could enter the Russian Federation without visas, and claim Russian citizenship and the associated social benefits (Federal Law of the RFSR No. 1948-I). As migrant selectivity increases with the difficulty of migration (Lee 1966), post-1991 migrants into the Russian Federation may not exhibit strong selectivity. Ease of migration has been associated with poor health outcomes among Puerto Rican migrants to the mainland United States (Landale, Gorman, and Oropesa 2006). Potentially, migrants from the CIS to Russia may even be negatively selected, if migrants include elderly or disabled people in search of pensions and medical care. We expect to find a healthy migrant effect, but anticipate the strongest indicators for health selectivity among migrants from non-Slavic regions, and among those with a native language other than Russian.

If migrants to Russia do experience any health advantage, existing research indicates the advantage is unlikely to extend to the second generation. Immigrants into Russia are exposed to cultural contexts in which high levels of alcohol consumption, poor diet, higher rates of smoking, and other unhealthy behaviors are common. To the extent that children of immigrants adapt to these cultural trends, they are likely to experience declines in health over time. This adaptation danger may be magnified by the discrimination that many migrants face in the Russian Federation.

This relationship may be complicated by the fact that today most adult children of foreign-born parents are children of Soviet-era migrants, who came to Russia under very different social, economic, and political circumstances than did many of today's first-generation immigrants. Soviet-era migrants are mostly internal migrants, and all

migrated within the context of highly regulated labor and housing markets (Buckley 1995). The selectivity of Soviet-era migrants may therefore differ substantially from the selectivity of more recent migrants, and that, as much as exposure to Russian society, may explain health differences across migrant generations. Nevertheless, based upon tendencies observed elsewhere, we anticipate that the second generation will exhibit a decline in health, compared to their parents.

4. Methods

To assess the health selectivity of first- and second-generation migrants in the Russian Federation, we use the 2004 Russian Generations and Gender Survey (RGGS). The survey—part of a multi-country study of gender, family, and intergenerational relationships—was coordinated by the United Nations Economic Commission for Europe, and financially supported by the Pension Fund of the Russian Federation and the Max-Planck Institute for Demographic Research in Rostock, Germany. By applying standardized practices and a panel sample design, it seeks to provide a “high level of comparability of data and method” (Generations and Gender Programme 2011). All participating countries follow the directives set by the Study Design and Sampling Working Group (SDSWG). In the Russian case, overall response rates were near 44%, except in the large metropolitan areas of St. Petersburg and Moscow (<15%) (Houle and Shkolnikov 2005). The sample generally reflects the population parameters of the 2002 census, and while not reflective of the two largest cities individually, the results are nationally representative.

The Russian sample for Wave One consists of 11,261 individuals between 18 and 79 years of age from 32 regions of Russia.⁴ Deleting respondents with missing values on our variables of interest (most often ethnicity: N=488), the 2004 RGGS generates an analytic sample of 10,670 for the exploration of nativity and health.

The RGGS questionnaire includes 14 sections, reflecting core modules from the cross-national Generations and Gender Program, and enhanced questions concerning pensions and family attitudes unique to the Russian study. Respondents were asked to report on all members of their households to augment cross-generational coverage, although our analysis is limited to the primary respondent of each household. Particularly important to this investigation, the survey gathered information on nativity, parent’s nativity, ethnic identity, and language for respondents and their parents, in

⁴ The weights for the 2004 GGS were originally based upon the 1989 Soviet census for the Russian Federation, with some updating for the results of the 1994 Russian Micro-Census (Kosolapov 2004). Given the high mobility of the population since 1994, and our desire to concentrate upon comparisons between groups of respondents (the native-born, foreign-born, and second generation), we elect not to weight the data.

addition to the standard questions regarding health status, socio-economic standing, social support, and demographic characteristics of respondents.

Health status is the primary outcome category. The specific variables employed in our investigation include self-assessed health, chronic conditions, and physical functioning. Self-assessed health is the respondent's subjective assessment of his or her general health measured by a standard Likert scale. We compare those responding that their health is very good or good, to all others, a very robust indicator in other studies of health differentials (Ilder and Benyamini 1997). We also include two physical functioning variables: the diagnosis of chronic or long-standing illness, and self-reported physical limitations. We compare those reporting chronic conditions or limitations to all other responses. We divide respondents into three categories, native-born (with both parents also born in the Russian Federation), foreign-born, and second-generation immigrants (born in Russia, but having at least one parent who was born outside of Russia).

We expect substantial variation among the immigrant population by regions of origin, and create three dummy variables identifying immigrants from the Slavic/Western region of the CIS (Ukraine, Belarus, and Moldova); the non-Slavic countries of the CIS (Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan), and countries outside of the CIS. Among second-generation migrants, we use the birth country of the respondent's mother as a proxy for origins.⁵ Reflecting variations in the cultural and political distance between the sending country and the predominantly Slavic Russian Federation, these categories are intended to detect possible variation within the CIS and the overall importance of Slavic cultural norms and the shared Soviet past within the CIS.

We also test the impacts of a number of socio-demographic variables associated with health. Age (measured in years), education (those with higher education in comparison to others), and sex (female as reference) are included as independent variables. Respondents with missing values on education are retained in a separate "missing" category, due to the high level of missing values (22%) on this variable. As socioeconomic resources, namely income and social support, are related to health outcomes, we add a measure of the reported difficulty in "making ends meet" in the household as a measure of economic stability and use three indicators of social support ("plenty of people to rely upon," "people I can lean on completely," and "enough people I feel close to"), to identify respondents with low to no social support. To further refine ethnic and linguistic differences, we incorporate a dummy variable for whether

⁵ No foreign-born respondents reported two native-born parents. Among respondents with two foreign-born parents, in all but 21 cases, mother's region of birth was the same as father's region of birth.

the respondent's native language is Russian and whether the respondent lists their ethnicity as Russian.⁶

We first examine the bivariate relationships between immigrant generation, origin-generation groups, and health. We then use logistic regression analyses to assess the effect of covariates. The first model contains origin-generation categories, age, and sex. The second model includes measures of socioeconomic status. The final model incorporates the language variable. The full model, focusing on the odds experienced across our six origin-generation groups in comparison to the odds experienced among the native population, enables us to test for the existence of a healthy migrant effect among immigrant groups in the Russian Federation, and observe the effect of second-generation immigrant status on health outcomes. We conduct separate logistic regression analyses for each of the three dependent variables: reporting good or very good health, presence of a chronic health condition, or a reported physical limitation.

5. Results

Table 1 provides a breakdown of our analytical sample by immigrant generation and country of origin. First-generation immigrants (the foreign-born) comprise just over 10% of the sample (1,090 individuals). Foreign-born respondents originate primarily in the CIS, with 458 coming from Slavic/Western states, 502 originating in non-Slavic CIS states, and 130 originating outside of the CIS. An additional 10% of the sample report at least one foreign-born parent (the second generation), the majority of whom report parental origins in the CIS, particularly Slavic/Western CIS states. Only 93 individuals in the second generation report origins outside of the CIS, reflecting low levels of international migration during the Soviet period.

⁶ We also examined the relationship between duration of residence in Russia and health among immigrants. In this sample, duration of residence, even when collapsed into as few as three categories, is highly correlated with age among the foreign-born. There is a negative relationship between duration of residence in Russia and health among immigrants, but this effect is entirely explained by age. In the interest of clarity, we do not include duration of residence in our regression models.

Table 1: Immigrant status by generation and region of origin, RGGGS 2004

Immigrant generation	Region of Origin				Total
	Russia	Slavic/ Western CIS	Non-Slavic CIS	Outside CIS	
1st generation immigrants	0	458	502	130	1,090 (10.22%)
2nd generation immigrants	0	625	199	93	917 (8.59%)
native population	8,663	0	0	0	8,663 (81.19%)
Total	8,663 (81.91%)	1,083 (10.15%)	701 (6.57%)	223 (2.09%)	10,670 (100%)

Table 2 presents the demographic, socioeconomic, and ethnic characteristics of the unweighted RGGGS sample, by immigrant origin and generation. In the study sample, across all origin and generation groups, most respondents are female. As in other aging European populations, immigrant groups tend to be younger than natives in the Russian Federation. With the exception of immigrants from the Slavic/Western region of the CIS (who have a mean age of 51.53 years), first- and second-generation migrant groups are younger than the native population. Immigrants, both first- and second-generation, are more likely to report higher education than are natives. The most highly educated groups are first- and second-generation immigrants from outside the CIS. In both groups, over 32% report having higher education, compared to only 21% of natives. Reported levels of life satisfaction were similar for native- and foreign-born respondents.

Table 2: Descriptive statistics of socio-demographic characteristics by origin-generation group, RGS 2004

Origin/ generation group	Percent male	Mean age	Percent with higher education*	Percent reporting very difficult to make ends meet	Percent with few sources of social support	Percent non- Russian Ethnicity*	Percent non-native speakers of Russian language*	Total
Natives	37.55	46.67	21.61	25.94	15.17	11.32	8.54	8,663
First generation immigrants	38.9	46.29	27.71	26.79	16.24	37.06	18.99	1,090
<i>Slavic/</i>								
<i>Western</i>	36.24	51.53 [^]	25.98	27.29	18.12	47.82	20.09	458
<i>CIS origin</i>								
<i>Non-Slavic</i>	41.24	42.78 [^]	27.49	27.49	14.54	27.49	15.54	502
<i>CIS origin</i>								
<i>Non-CIS</i>	39.23	41.31 [^]	34.62	22.31	16.15	36.15	28.46	130
<i>origin</i>								
Second generation immigrants	37.51	42.59 [^]	28.35	25.3	16.25	10.03	2.51	917
<i>Slavic/</i>								
<i>Western</i>	38.24	44.53 [^]	27.04	25.92	16.48	9.44	1.12	625
<i>CIS origin</i>								
<i>Non-Slavic</i>	35.18	35.60 [^]	30.65	23.62	15.08	8.04	3.52	199
<i>CIS origin</i>								
<i>Non-CIS</i>	37.63	44.54	32.26	24.73	17.2	18.28	9.68	93
<i>origin</i>								

Notes: N=10,670

[^] Mean significantly different from mean for native-born population, p< .05

* Chi-square significant at p< .05

First- and second-generation migrants differ from the native-born in terms of ethnic and linguistic identification. Over one-third of first-generation immigrants self-identified as members of non-Russian ethnic groups. Nearly half (47.82%) of the immigrants from the Slavic CIS states are not ethnically Russian. In the second generation, the percentage of second-generation respondents reporting a non-Russian ethnicity is modest (10%), similar to the percentage of non-Russians in the native population of the Russian Federation. Almost all (97.5%) of all second-generation immigrants report Russian as their native language, displaying higher levels of Russian

language identification than respondents born in the Russian Federation. The strong identification with Russian language and ethnicity in the second generation reflects the propensity of children of mixed marriages to adopt a Russian identity, a pattern also observed during the Soviet period (Anderson and Silver 1990).

Is there a statistically significant relationship between nativity and health in the Russian Federation? Table 3 presents bivariate relationships between immigrant generation and our three measures of health status. When region of origin is not accounted for we find no significant differences between immigrants and natives on any measure of health status. Approximately 30% of our sample report very good or good health, 40% report a chronic health condition, and 8% report a physical limitation. The native-born report slightly lower rates of good health and higher rates of health problems, but these differences are not significant.

Table 3: Health status by immigrant generation, RGGS 2004

Immigrant status	Percent reporting good or very good health	Percent reporting a chronic condition	Percent reporting physical limitation	N
1st generation	30.46	40.55	7.34	1,090
2nd generation	31.95	39.69	7.85	917
Native population	29.11	41.89	8.54	8,863
Total	29.49	41.57	8.36	10,670

When national origin is taken into account significant health differences appear, particularly in terms of self-assessed health and chronic conditions. Table 4 indicates that first-generation immigrants from Slavic/Western CIS states are less likely than the native population to report good or very good health and are also more likely to report a chronic health condition. The health disadvantage for Slavic immigrants disappears for second-generation respondents, who do not differ from the native population on any of the three health indicators.

Table 4: Health status by origin-generation group, RGGS 2004

Origin/generation group	Percent reporting good or very good health	Percent reporting a chronic condition	Percent reporting physical limitation	N
Native population	29.11	41.89	8.54	8,663
1st generation Slavic origin	24.02*	47.38*	9.39	458
2nd generation Slavic origin	28.64	40.80	7.52	625
1st generation non-Slavic CIS origin	33.07^	36.65*	5.98*	502
2nd generation non-Slavic CIS origin	43.72*	32.66*	6.53	199
1st generation non-CIS	43.08*	31.54*	5.38	130
2nd generation non-CIS	29.03	47.31	12.90	93
Total	29.49	41.57	8.36	10,670

Notes: *Significantly different from native population at $p < .05$

^Significantly different from native population at $p < .10$

Results for the two other migrant groups are quite different. First-generation migrants from the non-Slavic CIS states appear to have both an advantage in self-assessed health and lower reported chronic conditions compared to the native population, consistent with a healthy migrant effect. They are also the only group that is significantly less likely than the native-born to report a physical impairment. Contrary to the common pattern of decline in migrant health across generations found in the United States, these bivariate analyses indicate health advantages are even greater among second-generation migrants from non-Slavic CIS states in terms of self-assessed health and chronic conditions.

Among immigrants from outside of the CIS, we find that first-generation migrants report better self-assessed health than natives, and lower rates of chronic conditions, but the second generation from outside of the CIS has self-assessed health similar to the native-born, and higher rates of chronic conditions. This pattern appears most similar to the healthy migrant effect found in the United States.

Bivariate findings support the existence of a healthy migrant effect in the Russian Federation, but only for those from non-Slavic regions. But are the observed effects due to compositional differences between the first- and second-generation foreign-born and native-born, or directly attributable to migrant status? We conduct multivariate logistic regression analyses for each of the three dependent variables, comparing each of the six

origin-destination groups to the native-born in the sample. We control for socio-demographic characteristics, socio-economic factors, and language. Our results, presented in Tables 5, 6, and 7, find that controlling for age and sex (Model 1 of each table) accounts for most of the migration effect observed in the bivariate analysis.

Table 5 shows higher age is associated with lower odds of reporting good health. Men are more than twice as likely as women to assess their health positively, in spite of a significant mortality disadvantage. Controlling for the effects of gender and age, only first-generation immigrants from the non-Slavic CIS are statistically different from the native population. This group is 58% more likely to report good health in comparison to the native-born. As expected, having a higher education is associated with better odds of good health, and controls for access to economic and social resources demonstrate that people who report difficulty making ends meet or little social support have lower odds of reporting good health in Russia. But these associations do not diminish the positive self-assessed health effect for non-Slavic CIS immigrants. This advantage disappears only when mother tongue is controlled. Non-native speakers of Russian are more than twice as likely to report good health.

Table 6 examines the likelihood of reporting a chronic condition. Any variation with migrant status is almost completely accounted for by age and sex. The odds of reporting a chronic condition increase with age, but are 43% lower for men compared to women. Second-generation migrants from outside the CIS are 48% more likely to report a chronic condition than are natives, but the association is only marginally significant, and there is actually no significant difference in chronic conditions between this group and natives in the bivariate analysis. Additional control variables have similar effects as in Table 5: resource difficulties and lower social support are associated with elevated odds of reporting a chronic condition. Although there is no relationship between higher education and reporting a chronic condition, people who are missing on the education variable are less likely to report a chronic condition. Non-native speakers of Russian are 36% less likely to report chronic conditions.

Table 5: Logistic Regression Models assessing the link between migration, socio-demographic characteristics, resources, and self-assessed health, RGS 2004

	Model 1: Controls for age and sex		Model 2: Controls for resources		Model 3: Controls for language	
	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE
1st generation Slavic migrants	1.11	0.14	1.08	0.14	0.99	0.13
2nd generation Slavic migrants	0.85	0.09	0.84	0.09	0.9	0.1
1st generation non-Slavic CIS migrants	0.99	0.11	0.98	0.11	0.91	0.1
2nd generation non-Slavic CIS migrants	0.99	0.16	0.97	0.15	1.01	0.17
1st generation non-CIS migrants	1.58*	0.33	1.52*	0.31	1.27	0.27
2nd generation non-CIS migrants	0.74	0.2	0.72	0.2	0.71	0.2
Age	0.92***	0	.92***	0	.92***	0
Male	2.15***	0.11	2.17***	0.11	2.15***	0.11
Higher education			1.55***	0.09	1.56***	0.09
Missing education			1.11	0.08	1.04	0.07
Very difficult to make ends meet			.71***	0.04	.70***	0.04
Few sources of social support			.74***	0.06	.75***	0.06
Non-Russian mother tongue					2.29***	0.19
Pseudo-R2	0.2355		0.2447		0.2522	
N	10,670		10,670		10,670	

Note: ^ p<.10 *p< .05 ** p<.01 ***p< .001

Table 6: Logistic Regression Models assessing the link between migration, socio-demographic characteristics, resources, and chronic health conditions, RGS 2004

	Model 1: Controls for age and sex		Model 2: Controls for resources		Model 3: Controls for language	
	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE
1st generation Slavic migrants	0.99	0.1	0.98	0.1	1.03	0.11
2nd generation Slavic migrants	1.08	0.1	1.07	0.1	1.04	0.1
1st generation non-Slavic CIS migrants	0.99	0.1	0.98	0.1	1.01	0.1
2nd generation non-Slavic CIS migrants	1.18	0.19	1.17	0.19	1.14	0.19
1st generation non-CIS migrants	0.81	0.16	0.81	0.16	0.86	0.18
2nd generation non-CIS migrants	1.48 [^]	0.35	1.45	0.34	1.46	0.34
Age	1.05***	0	1.05***	0	1.05***	0
Male	.57***	0.03	.58***	0.03	.58***	0.03
Higher education			1.02	0.05	1.01	0.05
Missing education			.84**	0.05	.87*	0.05
Very difficult to make ends meet			1.13*	0.06	1.13*	0.06
Few sources of social support			1.20**	0.07	1.20**	0.07
Non-Russian mother tongue					.65***	0.05
Pseudo-R2	0.1324		0.1341		0.1362	
N	10,670		10,670		10,670	

Note: [^] p<.10 *p< .05 ** p<.01 ***p< .001

The only migrant group that is significantly less likely than the native-born to report a physical impairment in the bivariate analysis is first-generation migrants from the non-Slavic CIS. After age and sex are controlled for (Table 7, model 1), the association disappears. However, two new—although marginally significant—associations appear. Second-generation migrants from the non-Slavic CIS are 67% more likely than the native-born to report a limitation, and second-generation migrants from outside the CIS are 78 % more likely. In model 2, having higher education is associated with lower odds of physical impairment. Both having difficulty making ends meet and having little social support are associated with higher odds of physical impairment, although the direction of causal effect is questionable. Including these variables has little effect on the marginally significant effects of migration in model 1. Unlike in the results in Tables 5 and 6, Russian language is only weakly significant in decreasing the relative odds of reporting a physical limitation, and has little impact on other coefficients.

Table 7: Logistic Regression Models assessing the link between migration, socio-demographic characteristics, resources, and physical impairment, RGS 2004

	Model 1: Controls for age and sex		Model 2: Controls for resources		Model 3: Controls for language	
	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE
1st generation Slavic migrants	0.85	0.15	0.84	0.14	0.87	0.15
2nd generation Slavic migrants	1.04	0.17	1.04	0.17	1.03	0.17
1st generation non-Slavic CIS migrants	0.96	0.19	0.95	0.19	0.96	0.19
2nd generation non-Slavic CIS migrants	1.67 [^]	0.51	1.65	0.51	1.63	0.5
1st generation non-CIS migrants	0.91	0.37	0.95	0.39	0.98	0.4
2nd generation non-CIS migrants	1.78 [^]	0.6	1.84 [^]	0.62	1.85 [^]	0.62
Age	1.07 ^{***}	0	1.07 ^{***}	0	1.07 ^{***}	0
Male	1.11	0.09	1.16 [^]	0.09	1.16 [*]	0.09
Higher education			.80 [*]	0.08	.80 [*]	0.08
Missing education			0.92	0.08	0.94	0.08
Very difficult to make ends meet			1.55 ^{***}	0.12	1.55 ^{***}	0.12
Few sources of social support			1.57 ^{***}	0.13	1.57 ^{***}	0.13
Non-Russian mother tongue					0.79 [^]	0.11
Pseudo-R2	0.1286		0.1405		0.141	
N	10,670		10,670		10,670	

Note: [^] p<.10 ^{*}p< .05 ^{**} p<.01 ^{***}p< .001

6. Discussion and conclusions

Based on comparison of immigrants, second-generation immigrants, and the native-born (with native-born parents) we do find evidence of a healthy migrant effect in Russia, confirming the generalizability of previous work in North America and the Western Europe. In bivariate analysis, all first-generation migrants except those from Belarus, Moldova, or Ukraine report better self-assessed health than do the native-born. These advantages are, however, largely compositional. As shown by previous research in other cultural and political contexts, the relationship between migration status and health is based on sex, age, and native language. Males, respondents in the younger working ages, and those who report a native language other than Russian exhibit very strong health advantages in terms of self-reported health, chronic conditions, and physical impairment, and these factors explain the observed healthy migrant effect. These findings contrast with research on the United States and other migrant destination countries, where migrants experience health advantages independent of compositional effects.

Why is the healthy migrant effect weaker in Russia than in other countries? Given the particularly poor health indicators among the native population in the Russian Federation, we anticipated that the presence of a healthy migrant effect in Russia was highly likely. Our findings point to the importance of cultural distance, in terms of place of origin and native language, in accessing the general picture of migrant selectivity in the Russian Federation. Looking at migrants to Russia as a single, undifferentiated group produces very different results than does breaking migrants down by region of origin. Being a non-Russian speaker was one of the strongest predictors of both good health and lower odds of having a chronic condition. Conversely, Russian speakers, who perhaps more closely share the cultural context of the Russian Federation, exhibited no positive health selectivity.

The limitations of using the RGGs to measure the health of migrants in Russia, not a major focus of the study, are important to note. First, the RGGs does not include extensive information on health, and in particular did not collect data on drinking, smoking, or other health behaviors. Without this information we cannot test whether migrants have healthier lifestyles than do native Russians—an important component of the healthy migrant effect. Second, the ability of the RGGs sampling strategy to create a representative sample of migrants in the Russian Federation is questionable. Although our sample includes a large number of both first- and second-generation migrants, the survey may have best captured established, highly assimilated migrants who are similar to native Russians on most characteristics, health included.

While the sampling approaches and content of existing surveys are limiting, our findings point to several promising future avenues for cross-cultural research in the

study of health and nativity. We find support for raising important questions about both the universality of the health migrant effect in the first generation and negative health acculturation in the second generation. Additional research examining the health differentials within the Russian Federation can shed important insight into the nature of the current mortality crisis. We find that future work should clarify the types of migration streams involved (economic or political), the potential of shared cultural content between immigrants and the native-born, and the importance of mother tongue. Additional attention to the effects of gender, directly and in terms of the gender of foreign-born parents, is also likely to add to our understanding of cultural transmission and negative health behaviors. This type of future research is particularly important in the Russian Federation, where health is a central policy concern, and anti-migrant sentiments are rising.

Our findings clearly challenge prevalent beliefs within Russia that migrants, particularly those from the Caucasus and Central Asia, are less healthy than the native population, and bring the experience of migration and health in the Russian Federation into global discussions of migration, culture, language and health. Greater attention to evidence-based assessments of migration and health can be important in countering anti-migrant sentiments and stereotypes in Russia. This first step in examining health differentials by nativity and generation in the Russian Federation points to the need for additional comparative research on the health selectivity of international migrants and the status of second-generation immigrants, in order to contribute to a more global appreciation of the relationship between nativity and health.

7. Acknowledgements

This material is based upon work supported by the National Science Foundation under Grant No. 0904817, “*NSCC/LA: People Power and Conflict in the Eurasian Migration System*” (PI: Cynthia J. Buckley).

References

- Abraído-Lanza, A.F., Chao, M.T., and Flórez, K.R. (2005). Do healthy behaviors decline with greater acculturation? Implications for the Latino mortality paradox. *Social Science & Medicine* 61(6): 1243-1255. doi:10.1016/j.socscimed.2005.01.016.
- Akresh, I.R. (2007). Dietary assimilation and health among Hispanic immigrants to the United States. *Journal of Health and Social Behavior* 48(4): 404-417. doi:10.1177/002214650704800405.
- Anderson, B.A. and Silver, B.D. (1990). Some factors in the linguistic and ethnic Russification of Soviet nationalities: Is everyone becoming Russian? In: Hajda, L. and Beissinger, M. (eds.). *The Nationalities Factor in Soviet Politics and Society*. Boulder, CO: Westview Press: 95-130.
- Antecol, H. and Bedard, K. (2006). Unhealthy assimilation: Why do immigrants converge to American health status levels? *Demography* 43(2): 337-360. doi:10.1353/dem.2006.0011.
- Barrett, J. and Buckley, C.J. (2009). Gender and perceived control in the Russian Federation. *Europe-Asia Studies* 61(1): 21-49. doi:10.1080/09668130802532910.
- Buckley, C.J. (1995). The myth of managed migration: Migration control and market in the Soviet period. *Slavic Review* 54(4): 896-916. doi:10.2307/2501398.
- Cho, Y., Frisbie, W.P., Hummer, R.A., and Rogers, R.G. (2004). Nativity, duration of residence, and the health of Hispanic adults in the United States. *International Migration Review* 38(1): 184-211. doi:10.1111/j.1747-7379.2004.tb00193.x.
- Cockerham, W.C. (1997). The social determinants of the decline of life expectancy in Russia and Eastern Europe: A lifestyle explanation. *Journal of Health & Social Behavior* 38(2): 117-130. doi:10.2307/2955420.
- Cockerham, W.C. (2000). Health lifestyles in Russia. *Social Science & Medicine* 51(9): 1313-1324. doi:10.1016/S0277-9536(00)00094-0.
- Cockerham, W.C., Hinote, B.P., Cockerham, G.B., and Abbott, P. (2006). Health lifestyles and political ideology in Belarus, Russia, and Ukraine. *Social Science & Medicine* 62(7): 1799-1809. doi:10.1016/j.socscimed.2005.08.024.

- Coutenay, W.H. (2000). Constructions of masculinity and their influence on men's well-being: A theory of gender and health. *Social Science & Medicine* 50(10): 1385-1401. doi:10.1016/S0277-9536(99)00390-1.
- Deeks, A., Lombard, C., Michelmore, J., and Teede, H. (2009). The effects of gender and age on health related behaviors. *BMC Public Health* 9: 213-220. doi:10.1186/1471-2458-9-213.
- Dzhatoeva, F. (2010). Tuberculosis in labor migrant donor countries to the Russian Federation. *Economics of Public Health* 8: 14-18.
- Finch, B.K., Do, D.P., Frank, R., and Seeman, T. (2009). Could 'acculturation' effects be explained by latent health disadvantages among Mexican immigrants? *International Migration Review* 43(3): 471-495. doi:10.1111/j.1747-7379.2009.00774.x.
- Generations and Gender Programme. (2011). Key features [electronic resource]. Geneva: United Nations Economic Commission for Europe. <http://www.unece.org/pau/ggp/keyfeatures.htm>.
- Green, C.A. and Pope, C.R. (1999). Gender, psychosocial factors and the use of medical services: A longitudinal analysis. *Social Science & Medicine* 48(10): 1363-1372. doi:10.1016/S0277-9536(98)00440-7.
- Heleniak, T. (2008). An overview of migration in the post-Soviet space. In: Buckley, C.J., Ruble, B.A., and Hofmann, E.T. (eds.). *Migration, Homeland, and Belonging in Eurasia*. Washington, DC and Baltimore, MD: Woodrow Wilson Center Press and Johns Hopkins University Press: 29-68.
- Hodge, A.M., English, D.R., O'Dea, K., and Giles, G.G. (2004). Increased diabetes incidence in Greek and Italian migrants to Australia. *Diabetes Care* 27(10): 2330-2334. doi:10.2337/diacare.27.10.2330.
- Houle, R. and Shkolnikov, V. (2005). Low response rates in the cities of Moscow and Sankt-Peterburg and GGS-census comparisons of basic distributions. Rostock: Max Planck Institute for Demographic Research.
- Idler, E.L. and Benyamini, Y. (1997). Self-rated health and mortality: A review of twenty-seven community studies. *Journal of Health & Social Behavior* 38(1): 21-37. doi:10.2307/2955359.
- Jürgen, R. and Room, R. (2009). A case study in how harmful alcohol consumption can be. *The Lancet* 373(9682): 2176-2177. doi:10.1016/S0140-6736(09)61170-3.

- Kandiyoti, D. (2002). Post-colonialism compared: Potentials and limitations in the Middle East and Central Asia. *International Journal of Middle East Studies* 34(2): 279-297.
- Kosolapov, M. (2004). Preliminary report: Sample of the Russian Federation. Moscow: Demoscope.
- Landale, N.S., Gorman, B.K., and Oropesa, R.S. (2006). Selective migration and infant mortality among Puerto Ricans. *Maternal and Child Health Journal* 10(4): 351-360. doi:10.1007/s10995-006-0072-4.
- Landale, N.S., Oropesa, R.S., and Gorman, B.K. (2000). Migration and infant death: Assimilation or selective migration among Puerto Ricans? *American Sociological Review* 65(6): 888-909. doi:10.2307/2657518.
- Lee, E. (1966). A theory of migration. *Demography* 3(1): 47-57. doi:10.2307/2060063.
- Mansoor, A. and Quillin, B. (2006). *Migration and Remittances: Eastern Europe and the Former Soviet Union*. Washington, DC: World Bank.
- Marmot, M.G. and Syme, S.L. (1976). Acculturation and coronary heart disease in Japanese Americans. *American Journal of Epidemiology* 104(3): 225-247.
- Osadchuk, S. (2007). \$2.9Bln to go toward combating disease. *Moscow Times* 26 February.
- Pantzer, K., Rajmil, L., Tebé, C., Codina, F., Serra-Sutton, V., Ferrer, M., Ravens-Sieberer, U., Simeoni, M., and Alonso, J. (2006). Health related quality of life in immigrants and native school aged adolescents in Spain. *Journal of Epidemiology & Community Health* 60(8): 694-698. doi:10.1136/jech.2005.044073.
- Parsons, S., Godson, J.H., Williams, S.A., and Cade, J.E. (1999). Are there intergenerational differences in the diets of young children born to first- and second-generation Pakistani Muslims in Bradford, West Yorkshire, UK? *Journal of Human Nutrition & Dietetics* 12(2): 113-122. doi:10.1046/j.1365-277x.1999.00142.x.
- Perlman, F., Bobak, M., Gilmore, A., and McKee, M. (2007). Trends in the prevalence of smoking in Russia during the transition to a market economy. *Tobacco Control* 16(5): 299-305. doi:10.1136/tc.2006.019455.
- Perlman, F.J. (2010). Drinking in transition: Trends in alcohol consumption in Russia 1994-2004. *BMC Public Health* 10: 691. doi:10.1186/1471-2458-10-691.

- Renzaho, A.M.N., Swinburn, B., and Burns, C. (2008). Maintenance of traditional cultural orientation is associated with lower rates of obesity and sedentary behaviours among African migrant children to Australia. *International Journal of Obesity* 32(4): 594-600. doi:10.1038/ijo.2008.2.
- Reuters, A. (2009). Migrants in Russia beaten, exploited, rights report finds. RFE/RL Central Asia Report (10 February).
- Rumbaut, R.G. and Portes, A. (2001). Introduction-Ethnogenesis: Coming of age in immigrant America. In: Rumbaut, R.G. and Portes, A. (eds.). *Ethnicities: Children of Immigrants in America*. Berkeley: University of California Press: 1-19.
- Smol'iakova, T. (2009). 145 millionov. *Rossiiskaia gazeta* 5046 (24 November).
- Solé-Auró, A. and Crimmins, E.M. (2008). Health of immigrants in European countries. *International Migration Review* 42(4): 861-876. doi:10.1111/j.1747-7379.2008.00150.x.
- Tomkins, S., Saburova, L., Kiryanov, N., Andreev, E., McKee, M., Shkolnikov, V., and Leon, D.A. (2007). Prevalence and socio-economic distribution of hazardous patterns of alcohol drinking: Study of alcohol consumption in men aged 25-54 years in Izhevsk, Russia. *Addiction* 102(4): 544-553. doi:10.1111/j.1360-0443.2006.01693.x.
- Uretsky, M. and Mathiesen, S. (2007). The effects of years lived in the United States on the general health status of California's foreign-born populations. *Journal of Immigrant & Minority Health* 9(2): 125-136. doi:10.1007/s10903-006-9017-7.
- Vega, W. and Amaro, H. (1994). Latino outlook: Good health, uncertain prognosis. *Annual Review of Public Health* 15: 39-67. doi:10.1146/annurev.pu.15.050194.000351.
- Weine, S., Bahromov, M., and Mirzoev, A. (2008). Unprotected Tajik male migrant workers in Moscow at risk for HIV/AIDS. *Journal of Immigrant & Minority Health* 10(5): 461-468. doi:10.1007/s10903-007-9103-5.
- WHO. (2008). World Health Indicators 2008. Geneva: World Health Organization.
- Yang, D. and Martínez, C. (2006). Remittances and poverty in migrants' home areas: Evidence from the Philippines. In: Özden, C. and Schiff, M. (eds.). *International Migration, Remittances and the Brain Drain*. Washington, D.C. and New York: The World Bank and Palgrave Macmillan: 81-122.

Buckley, Hofmann & Minagawa: Correlates of immigrant health by generation in the Russian Federation

Zurabov, M. (2007). Interview with the Russian Federation Minister of Health. *Moscow Times* 26 February: 3.