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ORIGINAL PAPER

Barriers to Colorectal Cancer Screening Among Russian-speaking Immigrants: The Importance of Culture and Home Country Experiences

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Abstract
There is potential to improve low colorectal cancer screening rates, reduce mortality, and narrow health disparities, if the distinctive screening barriers among Russian-speaking immigrants were better understood. However, there is little relevant research about the topic. To address this gap, this study aimed to identify barriers to timely colorectal cancer screening, especially colonoscopies, among Russian-speakers in New York City. Thirteen key informant interviews were performed with providers, community leaders, and academics. Eight focus groups were then conducted with 81 Russian-speaking individuals, age 50–75, who had not had a timely colonoscopy. Results were translated, transcribed, coded and analyzed. Barriers identified included individual, communal, and structural issues. Distinctive barriers, such as those related to culture and to the experiences of living under the Soviet system, were uncovered. Barriers identified can potentially be reduced through interventions suggested by the research, including more education and more effective provider recommendations.

Keywords Cancer screening · Colonoscopy · Colorectal cancer · Immigrant · Russian · Former Soviet Union

Introduction

Colorectal Cancer (CRC) is the second leading cause of cancer death in the United States (U.S.) and in New York City (NYC). The detection and removal of precancerous polyps through increased CRC screening can reduce mortality rates [1, 2]. In New York City, an initiative to increase colonoscopy screening was begun in 2002, with citywide rates increasing dramatically, from 42% in 2003 to 62% in 2007 [3] and stabilizing at about 70% in recent years [4, 5]. When this study began in 2010, the screening rate was 55.7% for Russian-speakers in NYC, virtually all of them immigrants; a figure almost 12% lower than the city-wide average screening rate that year [6]. A more recent study found that colonoscopy rates for the Russian-speaking community in NYC had improved somewhat to 62% but was still not only suboptimal in general but also low compared to many other immigrant groups there [5].

The influence of ethnicity and migration on colorectal cancer screening is not a new idea [7, 8] but a growing number of recent studies have found racial and ethnic inequities in CRC screening, with foreign-born populations less likely to be screened both in the U.S. generally [8–10] and in New York City specifically [3, 5, 10, 11]. There can be great variations in health-related behaviors among immigrant groups, with the extent of CRC screening inequities varying by specific country of birth [12–15]. Immigrants can face challenges in receiving appropriate health care in general and cancer screening in particular; such as difficulties in understanding information about CRC screening because of limited English proficiency and cultural attitudes towards cancer and prevention, such as fatalism, which may reduce willingness to be screened [9, 15, 16]; there may be differences in the extent of such barriers found among immigrant groups, including Russian-speakers.

Despite this, few studies have analyzed CRC screening rates by ethnicity, country of birth, and language spoken and, even when there has been such research, the focus has been primarily on Latino or South/East Asian immigrants to the U.S. [5, 9, 17, 18]. These studies found ethnicity and/or nativity status to be associated with lower CRC screening, with Asians, Latinos and/or immigrants typically getting

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screened less than native-born Whites. This was true even when controlling for other demographic factors [5, 9]. It is likely, therefore, that the Russian-speaking community in the U.S. also has lower CRC screening rates and warrants special attention, being another ethnic minority with a large proportion of immigrants. The only one of these studies that examined Russian-speakers as a separate group found that they did indeed have lower rates, although it was a relatively small sample size and the differences between groups were not necessarily statistically significant [5].

There has been little attention given to CRC screening among Russian-speaking immigrants despite the fact that this community may face special barriers that can affect CRC rates, such as their experiences living under the political and health care systems in the countries of the Former Soviet Union (FSU). The Soviet health care system had universal care yet health outcomes were poorer than in many Western countries [19, 20]. The system was characterized by centralized planning and control, underfunding, deteriorating facilities, poor morale and consumer dissatisfaction [19–21]. Although ahead of the U.S. in terms of size of the health care workforce, medical staff were often low-paid and inadequately trained personnel, which could result in mistrust of the healthcare system among the general population [19, 20].

There were also notable Soviet medical care system characteristics related to approach to care, not only resources. In particular, the system was considered very paternalistic towards consumers/patients [21–23]. This was considered an important part of the health care system's culture of doctor-patient relationships, so that patients were not accustomed to participating in decisions about their health and treatment [21].

Poor health outcomes during the Soviet era were related to poor health behaviors among the population [19, 21, 24]. There was little emphasis on promoting a healthy lifestyle. Heavy tobacco and alcohol use, poor dietary intake, and low levels of physical activity were common, as well as an inadequate understanding of how lifestyle and cultural values can affect health and need for medical care [20, 21, 25, 26]. The Soviet system lacked a focus on prevention and public health, with population health being seen through the lens of medical care for diseases [21]. Soviet ideology, with its negation of individuality and patient initiative in health matters, led to a passive orientation toward healthy living and a lack of responsibility by individuals for promoting their health [26].

Cultural attitudes and experiences found in Russian-speaking immigrants' countries of origin can also have an effect on behaviors related to cancer in particular. Attitudes towards monitoring of the burden of cancer, societal attitudes towards cancer prevention, effects of inequitable treatment and extent of access to medicine can all affect cancer prevention and control [27]. The word "cancer" itself has been found to be taboo among Russian-speaking immigrants and can affect disclosure and dynamics of care for cancer [28]. Fatalism or a feeling of lack of control towards cancer outcomes have been disproportionately found among those born in FSU countries [22, 29].

Although there were substantial reforms after the breakup of the Soviet Union, many of the characteristics noted continued to a large extent. Access to care and financial protection within the national health system as well as health status of the population did not improve substantially after the breakup, remaining considerably worse than in other countries of similar economic performance [21]. Paternalistic behavior is also still an important characteristic of the system in the post-Soviet era, which began at the end of 1991 [30]. The effects of paternalism were observed among immigrants from the FSU, with one study concluding that many immigrants would prefer their doctors to communicate with them in a manner that non-immigrants would consider paternalistic [31].

In terms of health behaviors, lack of funding, the adherence to an outdated paradigm of infectious disease control and limited opportunities for public health training and research all undermined the effectiveness of population-based interventions. Poor health behaviors were found among immigrants from the FSU in the post-Soviet era as well [25, 26], although because of selective factors such as education, those migrating may have a healthier lifestyle than those staying in the FSU [31, 32].

High cancer rates continued even after the dissolution of the Soviet Union [21]. Linguistic and cultural factors combined to negatively impact cancer care processes, including among Russian-speaking emigrants [28]. It is also important to note that health care service utilization can vary by country of birth as well as several other demographic factors, both during and after the Soviet era [21, 26, 33].

The population of focus for this study is Russian speaking immigrants in New York City. Russian-speaking immigrants to the U.S, whether in New York or elsewhere, have been an understudied group despite the distinctive characteristics noted. The effectiveness of colorectal cancer screening and the opportunity for further mortality reduction have driven significant efforts by the broader health community to identify effective strategies for increasing screening among other groups [34–36]. However, despite the potential to improve low CRC screening rates and reduce mortality if barriers were better understood, to our knowledge there have been no prior studies about barriers to colonoscopies and other forms of CRC screening among Russian-speaking immigrants in the U.S.

In order to address this gap in knowledge, this study aimed to identify barriers to timely colorectal cancer screening, especially colonoscopies, among the Russian-speaking

community in NYC. These included both barriers to CRC screening distinctive to this group as well as those shared with other immigrant and ethnic groups.

Methodology

Setting

We conducted this study in New York City, home to the largest population of immigrants from the former Soviet Union in the U.S. The size of the community is unknown but is estimated to number about 200,000 in NYC, according to the American Community Survey [37]. As the city with the largest number of Jews, the predominant religion of Russian-speaking immigrants, New York City has attracted a large number of these immigrants, who arrived in several waves starting in the 1970s [38]. They have especially settled in sections of Brooklyn, where previous waves of Jewish immigrants were moving out to other areas [38]. Russian-speakers are also concentrated in specific neighborhoods in Brooklyn and Queens where CRC screening was found to be typically lower than citywide rates at the time of the study, based on an analysis of the New York City Department of Health and Mental Hygiene's Community Health Survey. This study focused primarily on these neighborhoods and included Coney Island, Bensonhurst/Bay Ridge, Brighton Beach/Sheepshead Bay, Borough Park and Forest Hills/Rego Park.

Design

The study, a collaboration between the New York City Department of Health and Mental Hygiene (DOHMH) and New York University School of Medicine (NYUSOM), used a two-stage qualitative research design involving interviews and focus groups, both performed in 2012, to attempt to uncover underlying causes of inadequate colonoscopy rates among the target population.

The first phase involved key informant interviews with physicians, community leaders, and academics with relevant expertise. Interview notes were analyzed to better understand underlying issues related to research objectives. Key informant interviews were typically conducted at the informants' offices, except in a limited number of cases where they were performed by telephone for logistical reasons.

In the second phase, a series of eight focus groups were conducted. Inclusion criteria included being Russian-speaking, a NYC resident, and age 50–75. The exclusion criterion was having had a timely colonoscopy, defined as one within the last 10 years [39]. Focus group participants were recruited by telephone through several community organizations serving the Russian-speaking population in NYC. The focus groups were performed at the offices of these community groups.

Key informant interview findings plus prior research were used to develop segmentation.

The focus groups were segmented by gender because of differences in behaviors and attitudes; three focus groups were all male and five were all female, because a disproportionate number of those not having colonoscopies are women and because males were more difficult to recruit. In addition, based on key informant recommendations. two groups consisted solely of Bukharan immigrants, primarily Jews from the central Asian region of the Soviet Union; this included countries such as Kazakhstan, Kirgizia, Turkmenistan, Uzbekistan, and Tajikistan. This is because informants considered Bukharans to have a distinctive culture compared to immigrants from other regions of the former Soviet Union.

Detailed moderator guides were developed based on the key informant interviews, analyses of the NYC DOHMH's Community Health Survey, and relevant literature. Topics in the guide included: Health care priorities, health care access, U.S. versus Soviet health care systems, colorectal cancer, colonoscopies, other forms of CRC screening, reasons people did not get screened, and potential interventions. Focus groups were conducted in Russian by an experienced bilingual moderator. Focus groups lasted at least 90 minutes and were audio-recorded, transcribed and translated into English by the moderators. All participants completed a demographic survey prior to the focus group. Participants received a $50 gift card to compensate them for the time spent in the focus groups as well as any travel.

Analysis

A qualitative content analysis methodology was used, allowing subjective interpretation of textual data content through the systematic classification process of coding and identifying themes [40]. In particular, a conventional approach of content analysis was used to interpret the text [40], because no analysis categories had been previously constructed given the limited information about the topic.

The codebook was developed by the investigators with the participation of coders. To increase reliability, assignment of codes to quotations was done separately by two coders with qualitative research training and CRC screening knowledge. This was an iterative process and inconsistencies among codes assigned were discussed by the coders until agreement was reached. Codes were then matched to each section of the analytic plan and relevant portions of the transcripts were pulled out and analyzed. When the responses among participants became repetitive, in terms of answers to the research questions, it became clear that data saturation

was reached and therefore further data collection was not required.

All eligible participants were consented orally prior to the session, since recruitment was performed by telephone. The study was approved by the NYUSOM Internal Review Board and exempted by the NYC DOHMH Internal Review Board.

Results

Study Sample

During the first phase, 13 key informant interviews were conducted. These included five Russian physicians, five Russian community leaders, and three academics with expertise about cancer screening among Russian-speaking émigrés. Focus groups were then performed to build upon the interviews and more deeply explore potential barriers and interventions. Eight focus groups were conducted with 8–11 Russian-speaking participants per group and 81 participants altogether. None of them had received a timely colonoscopy, defined as one within the past ten years, as commonly recommended [2]. Demographic and health care access statistics for the focus group participants can be found in Table 1.

Table 1 Description of focus group participants

Variable	Category	Percent (N = 81)
Gender	Male	44
	Female	56
Age	50–64	49
	65–74	38
	75 +	13
Country of birth	Russia	20
	Ukraine	15
	Uzbekistan	15
	Other	50
Religious denomination	Jewish	60
	Orthodox Christian	25
	Muslim	5
	Other /None	10
Year arrived in the US	< 1990	9
	1990–1999	58
	2000–2012	33
Marital status	Married	55
	Widowed	30
	Divorced/Separated	15
Employment	Working (at least part-time)	17
	Not Currently Working	83
Health insurance	Government	70
	Private	20
	None	10
Able to get needed care	Yes	69
	No	22
	Unknown	9

Barriers

A large number of potential barriers to obtaining timely colonoscopies were identified by both key informants and focus group participants. Barriers can be grouped into the following categories: individual/behavioral, community/institutional/cultural, and structural. These included barriers related to providers, patients, and systems.

Individual/Behavioral Barriers

Many participants and informants thought that many Russian-speakers will not see their doctor until they feel sick, especially with regards to screening. As one participant said "There was no pain and no symptoms. What is the point of intervening? It is not pleasant for me to do it for nothing." Participants generally believed there was no need to go to the doctor if they felt fine and did not think that they had risk factors. One justified not getting screened for colorectal cancer by saying "I am a very energetic person and I have good genetics." Similarly, many key informants stated that in FSU countries preventive services were typically not offered and people only visited a doctor when experiencing symptoms. Several of the physician informants interviewed stated that they are asked repeatedly by patients regarding colonoscopies, "Why do I need an invasive procedure if I don't even have any symptoms?" This was true even when participants were aware there may be consequences of not getting screened. As one observed, "Unfortunately, we see our doctors when the situation is critical. We ignore preventive measures. Then your illness becomes chronic." Another said, "I understand it mentally but in reality I don't do it."

A great majority of participants did understand the importance of a healthy lifestyle, with several indicating that their health behaviors had improved since they emigrated and others noting that doctors in the U.S. recommended preventive measures more than doctors in the FSU, as well as U.S societal attitudes encouraging a healthy lifestyle more, as compared to the FSU. One participant said: "I really care about my health because I live in this country. If I had stayed in the Soviet Union, I would have died already." However, similar to those who were aware of the value of getting screened for CRC yet did not do so, a number of participants had knowledge about the importance of a healthy lifestyle but this did not affect their behaviors. One said that "Russians have a tendency to be stressed, over-eat, drink excessively and have a cavalier attitude to their health and its prophylaxis."

Another suggested a reason, "Now most of us are aware that smoking is very bad. It is harmful. But still we continue to smoke and don't quit. Why? No willpower." However, for some participants, CRC screening was different from other types of preventive behaviors, with a small number of women even getting a mammogram regularly yet not getting screened for CRC. One said, "I have had a mammogram done three times already. The doctor has [unsuccessfully] been trying to convince me to have a colonoscopy for seven years already."

In addition to the common explanations of people not exhibiting symptoms, not feeling at risk or having fatalistic beliefs, both informants and participants consistently emphasized that Russians don't like invasive procedures. A number of the focus group participants also expressed a fear about the procedure itself, such as risk of perforation, or a belief that the procedure is painful. Similarly, participants often cited the preparation for the procedure as being unpleasant.

Some participants also expressed a reluctance to discuss cancer because of home country experiences, with one saying "In Russia, people do not talk about cancer. This disease is concealed by both doctors and patients." There was also a belief among some that having CRC is shameful and that this discourages people from talking about the disease. One participant said "Some people suffer from this disease but still they are embarrassed. Even now, we are embarrassed." Some also chose not to get a colonoscopy because they felt embarrassed about having the procedure itself or issues of modesty such as not being able to find a doctor of the same gender.

Community/Institutional/Cultural

A possible reason for the symptoms-centered approach described and the lack of getting screened is related to what many participants, as well as informants, called the "Russian Mentality." One participant said, "There is a difference between the Russian and American mentalities. When an American knows that he has to do such and such a test at the age of 50, they go and do it on time. Russians do not." Another said, "We rely on Russian 'avos', meaning that we hope that a problem will somehow be resolved without our intervention. We mostly rely on ourselves. We are not as active as should be."

While avoidance of screening and other preventive behaviors can be found among many ethnic groups, participant statements indicate that it may be especially true among Russian-speakers and grounded in their culture. There is a Russian saying, mentioned by several informants and participants, that captures why they often do not see a health care provider when no symptoms exist: "Don't trouble the trouble until the trouble troubles you." In addition, at least some informants and participants thought that pressure needs to come from providers for patients to take the test because they are not used to contacting doctors as a result of their experiences under the Soviet system; as a key informant noted, "why should one expect patients to change behaviors after emigrating to the U.S." This mentality was thought to apply to other health behaviors too. A participant said, "I do morning exercises, walk a lot and bike…my doctor told me that I don't have a Russian Mentality because Russians don't maintain an active lifestyle."

Participants thought that health care in the FSU was more paternalistic and that U.S. residents needed more self-responsibility and initiative because of the greater freedom in society there. This paternalism was seen by some as an element of the Russian Mentality, one which serves as a barrier to cancer screening and other health seeking behaviors. One participant said "Sometimes it [the freedom] is frightening. We got used to decision making being the responsibility of others. Here you have to do it… in order not to make a wrong choice, you'd rather not make any decision at all." Another said, "We haven't learned yet how to use freedom to the extent that the Americans do. We still have a Soviet mentality."

Several participants said they do not always take doctors' advice on full faith. One stated that: "If a doctor suggests a test and I believe I don't need it, I will decline it." Even when they do see a doctor, Russian-speaking patients were described by a number of informants as "skeptical", "stubborn", and/or "suspicious", people who will not trust their doctor's advice until they have researched the issue themselves. A physician informant interviewed noted a strong mistrust among Russian-Americans about the Russian medical system that has been carried over in the U.S. Several informants felt that Russian patients are accustomed to a more authoritarian doctor-patient relationship and that doctors' well-intentioned efforts to provide more options and involve the patient in decision-making can be misinterpreted as "weakness and uncertainty."

There was a greater diversity of opinions among the focus group participants about trust, however. Doctors play a critical role in providing healthcare and medical information, according to most focus group participants. Almost all of them said that they seek advice from doctors whenever they face a critical health concern. The majority of participants go to their primary care physician, and some use specialists. As one said, "I believe if I choose a doctor, I have to trust him. If he refers me for a test, he knows what he is doing. He is a doctor. I think we have to do what our doctor recommends."

When probed, a large minority of participants who expressed an opinion on the topic indicated at least some skepticism about doctors'' recommendations. As one said, "I am an educated person, but still I am thinking [for myself]. In other words, I don't trust my doctor completely." Another

said, "I try to understand doctors' recommendations, consider them carefully and discuss them with the doctor, not accepting anything on trust." Further, doctors are not always the first source of information with regard to health issues. Participants would often seek advice from friends and family or try to self-diagnose before approaching a health-care professional. One said, "Last year I was recommended to have a [colonoscopy] test but my friends dissuaded me from having it."

According to both participants and informants, it was not uncommon for doctors to recommend colonoscopies for a number of years, yet the vast majority of their patients did not adhere. Doctors sometimes recommended other CRC screening procedures such as a fecal occult blood test (FOBT) or sigmoidoscopy but, as with colonoscopies, individuals often did not adhere to the recommendation. Some patients explained that this was because they did not take their doctor's advice seriously. A physician informant thought that Russians are a very pragmatic people so explaining differences between having a colonoscopy early and doing it late may be helpful. However, a number of participants said that it is not only what the doctor recommends but how he says it and how much he emphasizes the procedure's importance that matter. They thought that a doctor saying casually: "it would not hurt to do it" versus a stronger statement can make a difference. Some said not only words but doctors' actions in being forceful had an impact.

Attitudes towards cancer seems to be different in Russia than in the U.S., where it was said that doctors do not talk to patients about cancer, considered a very sensitive topic. A majority of participants said they did not have enough information about CRC screening. But even when participants knew about colonoscopies and their importance, they typically still chose not to follow through with what intellectually they knew they should do. Some mentioned fatalism as a reason, with one saying "everyone has their own destiny."

Structural

There were also some system-related barriers identified. Although the large majority of participants reported having insurance, some were uninsured and cost affected their decisions as to when to see a doctor. One said: "We think that a medical procedure is very expensive and if you don't have medical insurance you better not do it." Even for those who had insurance, there was sometimes underinsurance or uncertainty about whether the procedure was covered.

Lack of free time was an issue for some participants. For several, there were other priorities that came before colonoscopies. One said "I don't have time to think about myself. I don't have time to take care of myself. I have to take care of my mother and husband." Another said "People who work are busy; they do not have time to go visit doctors just to check something." Several participants also mentioned the economic costs of taking time off from work for the procedure and the preparation. Some also noted that it often involves a lot of waiting time in the doctor's office.

Discussion

Improved colorectal cancer screening rates, especially for colonoscopies, can help lower morbidity and mortality rates for CRC among populations [41]. There have been studies about barriers to colorectal cancer screening among other immigrant groups in the U.S. with low screening rates such as Latinos and East Asians, with variations found by country of birth [12–15]. Despite this, to our knowledge, there have not been prior studies focusing on colonoscopy barriers among Russians in the U.S. and this study can make an important contribution towards filling that gap.

Although about 30% of all NYC residents in the target age range do not get timely colonoscopies, the Russian-speaking community in New York City in particular may have a need to improve their CRC screening rates. This is not only because their rates are lower than many other immigrants [5], but because they may be more at risk for developing colorectal cancer than many other groups [42–45]. Further, Russian-speakers may have distinctive barriers and special opportunities to address them. This study uncovered a number of potential reasons why Russian-speaking immigrants in NYC do not get screened for CRC and suggested some potential ways to improve screening rates.

Based on the themes that emerged in focus groups, the reasons for suboptimal colonoscopy rates among Russians in NYC are multiple, complex, and intertwined but in particular were related to individual attitudes and behaviors, communal/cultural beliefs, and structural issues. Barriers included those shared with the general population, those shared with other immigrant groups, and those which appeared to be specific to Russian-speaking immigrants.

Some of the barriers found in the study are similar to those in the general population, such as dislike of the procedure or lack of adequate health insurance. Some of the barriers mentioned by informants and participants are common among other ethnic minorities and immigrant groups in the U.S [10, 13, 46]. For example, even when aware of colonoscopies, many Russian-speakers seem resistant to having the procedure performed when they don't exhibit symptoms. There is a real need for more detailed information both about the procedure and why one should have a colonoscopy even before exhibiting symptoms.

However, there were important barriers uncovered that appear to be distinctive to the Russian-speaking population in NYC. These highlight the need to pay more attention to cultural factors and to the continued impact of experiences

in immigrants' home countries, even after migration. Some barriers were related to what many focus group participants referred to as a "Russian Mentality", involving a number of cultural attitudes, in part formed by people's experiences living under the Soviet system.

It was difficult for respondents to adequately describe what is the Russian Mentality and there appears to little academic literature analyzing the connection between the "Russian Mentality" and cancer screening or other health behaviors. This study may make a contribution by identifying a number of elements which can at least partly explain the Russian Mentality as it relates to health. These include an expectation of paternalistic attitudes by the health care system, a degree of mistrust towards doctors, an inactive lifestyle and general lack of focus on prevention, and perceptions about the nature and necessity of certain procedures because of culturally-influenced beliefs [21–23, 30]. This study shows how even for those who emigrated from the FSU, the Russian Mentality can have a major impact on health-related behaviors.

The Russian Mentality's connection with health is complex, with seemingly paradoxical elements. We found that on one hand Russian-speaking immigrants often have a mistrust of authority and a desire to make their own decisions. They were said to not accept their doctor's advice until they have researched the issue on their own. Further, they may have fatalistic beliefs leading them to act independently of physicians' advice. On the other hand, the Russian health system was also considered paternalistic and Soviet society discouraged independent thinking.

Therefore, life under the Soviet system can impact health-seeking behaviors in the U.S. because Russian immigrants over age 50 may have an insufficient sense of autonomy in terms of making their own health decisions because of having lived under the Soviet system. As a result, there may be a stronger need for doctors in the U.S. and elsewhere to appropriately promote CRC screening, such as colonoscopies, among their Russian-speaking patients.

Note that while some of the study participants lived in FSU countries even after the breakup of the USSR before migrating to the U.S., there is evidence that the life stage of early adulthood, when virtually all participants still lived under the Soviet system, typically has the largest influence on health practices [47]. Further, many of the themes identified such as paternalism and lack of attention to health-seeking behaviors, have been found to some extent even in the post-Soviet era [21, 30]. However, while beyond the scope of this study, the differential impact on cancer screening of living in the Soviet Union vs. living in these countries after the Soviet Union's breakup could be useful to research.

Home country experiences may explain why Russian-speaking immigrants may not always adhere to physician recommendations for CRC screening. Further, it appears that it is not just what doctors say but how they say it that may impact their decision to get screened, perhaps because of Russian patients' low self-efficacy, consistent with other research [29]. Doctors should therefore increasingly emphasize the procedure's importance without appearing overly authoritarian.

While our study appears to be unique in focusing on CRC screening barriers among Russian speaking immigrants, there has been research about breast cancer screening among Russian immigrants, albeit in Israel [29]. As with our study, it was found that even Russian-speakers who knew key cancer facts, believed in their own susceptibility, and acknowledged the benefit of early detection, in practice did little to avert the danger. The findings of the paternalistic health care system in the FSU and the external locus of control that may mitigate taking full responsibility for one's health is consistent with prior studies, both before and after the breakup of the Soviet Union [21–23, 29, 30, 38].

Policy Implications

Interventions can be developed to help overcome barriers identified and facilitate increasing colonoscopy rates among Russian speakers in NYC and elsewhere. The impact of discussing the nature and importance of colonoscopies was mentioned by virtually all informants and focus group participants, highlighting the importance of education. Doctors should try to more effectively convince their patients to get a colonoscopy and explain all of the benefits of this procedure, while doing so in an appropriate and consistent manner. As one participant said about colonoscopies, "A doctor and only a doctor can convince a patient to have one, not forcing a patient. The only way is if a doctor consistently tries to convince their patient and explain all of the benefits."

Lack of information on low-cost colonoscopy options can also be addressed through campaigns to promote screening. Articles or even brochures with information can affect people's decisions to get screened, especially when combined with education by doctors or influencers such as spouses, children or friends. Implementing interventions to improve CRC screening rates that have been effective with other groups, such as patient navigators or other community health workers, should also be tried [34–36].

However, this study highlights the fact that impacting CRC screening rates is often more than merely educating patients. Lack of attention to elements of the "Russian Mentality" may partly explain the study's finding that many patients ignore their physicians' screening recommendations for many years, even when insured. As part of cultural competence training, providers serving Russian-speaking populations should be sensitized to relevant aspects of the Russian Mentality.

The study may also prove useful for ethnic groups other than Russian-speakers in shining a light on the importance of examining the impact on CRC screening not only of acculturation in the host country but the effects of living in the home country. The differing impact of home and host countries on healthy lifestyle behaviors has been examined before in other contexts [48] but it has rarely been examined for cancer screening. It is important to make efforts to try to capture this information, even if not always easy to obtain.

Limitations/Additional Research

This study was limited by sample size, and while the method of participant inclusion was purposive, it was not necessarily representative. However, it nonetheless serves a critical exploratory role because so little is known about this population's attitudes toward CRC screening. The information can be used as a foundation for piloting and evaluating future interventions to improve colonoscopy rates and preventive health in general for the Russian-speaking community. It is also hoped that this paper will lead to quantitative studies involving surveys of larger samples of this understudied population to enable more precise findings.

It is possible that results could vary since the time the focus groups and interviews were performed. However, the study's primary objective was to identify and better understand the barriers, rather than to measure exact prevalence; there is no theoretical reason to expect the impact of Russian culture and home country experiences to have changed substantially since the data was collected. Further, the topic of this research has been understudied and the results from this study can still make an important contribution.

As noted, there were many mentions of a "Russian Mentality" but it was not always fully clear exactly what this was and whether definitions were consistent among participants. The nature and potential impact on health of the Russian Mentality and its elements, identified in this study, is an important topic. It should be explored further and better operationalized so it can be measured more accurately in future research.

Conclusion

New York City's Russian-speaking residents have important barriers to undergoing timely screening colonoscopies, as well as other types of CRC screening. Reasons for this were numerous, including individual/behavioral issues, community/institutional/cultural issues, and broader structural barriers, many of which were related to distinctive aspects of these immigrants' culture and home country experiences. Particularly important barriers included lack of education about the procedure, lack of understanding of the need for screening despite a lack of symptoms, and the need for providers to recommend the procedure in an appropriate manner. These can potentially be addressed through appropriate interventions, although more research is needed about the topic.

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