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Canadian Muslim Health Exceptionalism



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We gratefully acknowledge financial support from the Department of Historical and Cultural Studies at the University of Toronto Scarborough.

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Community Consultation: Canadian Muslim Health Exceptionalism

This report follows a recent scoping review on Canadian Muslim health. The purpose of this report is to (1) identify and summarize existing research, (2) share information about current scholarship; (3) identify gaps in existing knowledge; (4) provide recommendations for future research, policy, and practice; and, most importantly, to (5) consult with community partners and organizations, public policy officials, and researchers to bridge gaps in health care and research.

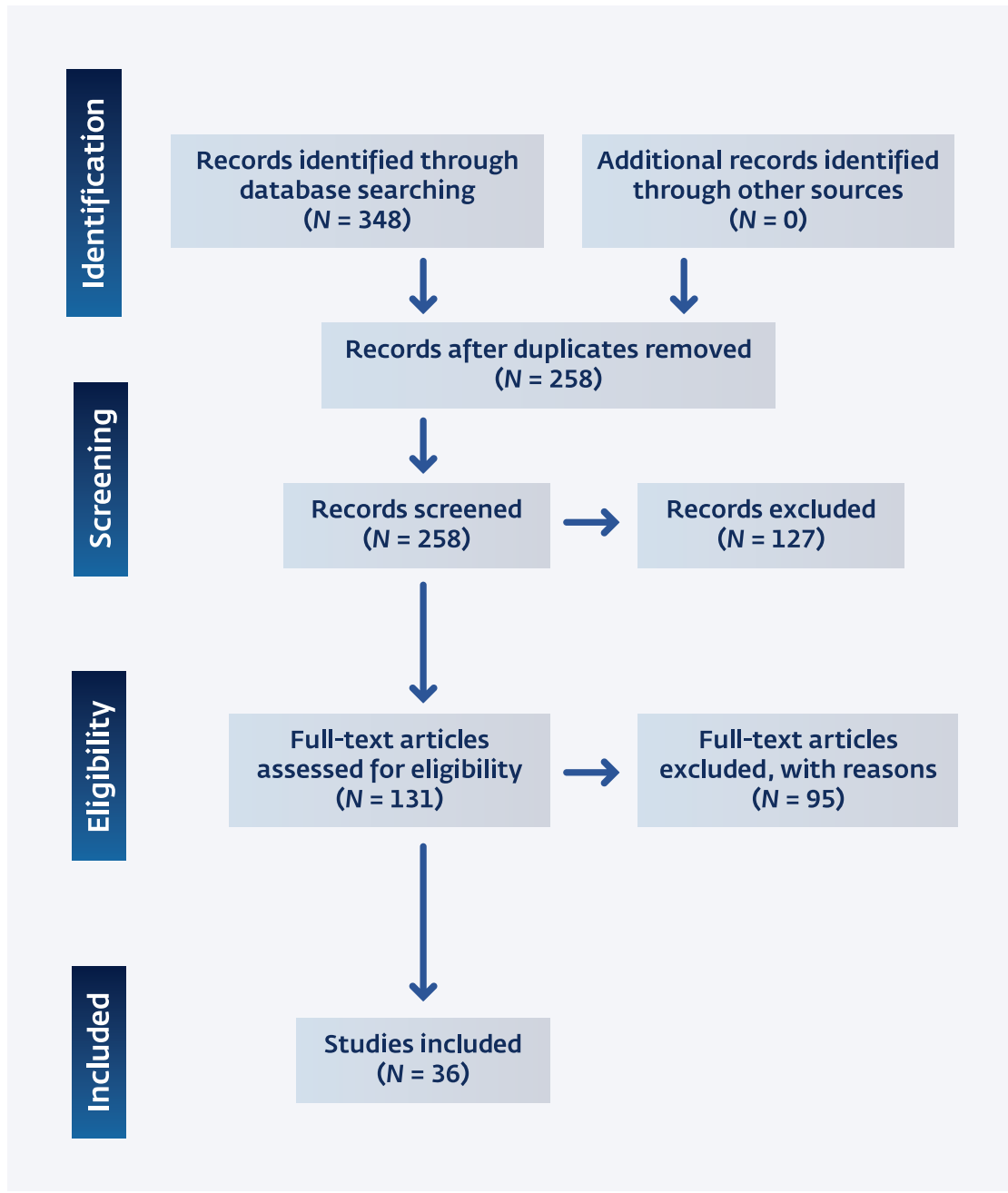
Scoping Review Methodology

We follow the Arksey and O'Malley [1] framework, a current standard for conducting scoping reviews among public health and social science researchers. This scoping review was conducted in five steps. First, we established the research questions, the population of interest, and the outcomes of interest. Second, we identified and organized the scholarly literature that would fit our focus. Third, we selected the research (see Figure 1 below), and fourth, we charted the findings. Finally, we assembled, summarized, and reported the results in the form of this scoping review. Although not an analytic step, to be more responsible and responsive in this crucial research, we are consulting with community organizations and partners to further develop, refine, and revise this review. Steps 1 through 4 are described in Table 1 below.

Table 1: Scoping Review Process

Step	
1. Identify research question	<p>Research question: What research has investigated Canadian Muslim health?</p> <p>Population: Canadian Muslims</p> <p>Outcomes: physical health, chronic illnesses, acute illnesses, terminal illnesses, mental health, and linked outcomes</p>
2. Identify and organize scholarly literature	<p>Search engines: PubMed, MEDLINE, PsycINFO, OVID, Scopus, Web of Science, Cochrane Library, and Google Scholar</p> <p>Search terms: Canadian Muslim health, Canadian Muslim epidemiology, Canadian Muslim public health, Canadian Muslim mental health, Canadian Muslim chronic illness, Canadian Muslim disease, Canadian Muslim fatalities, Canadian Muslim wellbeing</p>
3. Research selection (see Figure 1)	<p>Inclusion criteria: a focus on Canadian Muslim health</p> <p>Exclusion criteria: articles that were not original studies (e.g., reviews), studies that did not include a population-based sample, studies beyond Canadian borders including international studies, and studies that include religiously diverse samples but did not include a means to measure religious affiliation or identity</p>
4. Research charting	<p>Key elements: author name, publication year, health subcategory of focus, methodology, sample size, sample ethnic composition, sample gender composition, sample religious affiliation, and the study geographic area</p>

Figure 1. Preferred Reporting Items for Systemic Reviews and Meta-Analyses (PRISMA) Flow Diagram for the Scoping Review Process



Canadian Muslim Health

After presenting the overall findings, we address the studies thematically according to study focus. The study characteristics are presented in Table 1. The studies focus on general health (N=4), mental health (N=8), physical health (N=4), sexual and reproductive health (N=15), and old age (N=5). Some of these categories were more populated than others, and some studies include multiple foci (see Table 2). The number of publications per five-year period increased over time, with 2017 the year with most publications (N=8, not shown). Over half of all studies use quantitative research methods, though less than one-fifth of all studies use representative population based samples. Over one-third (39%) of studies draw on qualitative research methods. Only one study featured mixed methods research design.

Table 2. Characteristics of Included Studies (N=36) on Canadian Muslim Health

Characteristic	N	Characteristic	N
Study Focus		Sample Ethnicity	
General Health	4	All Canadians	13
Mental Health	8	Multiple Muslim-majority countries	13
Physical Health	4	Arab	5
Sexual Health	15	Iranian	1
Old Age	5	South Asian	4
Publication Year		Sample Religious Affiliation	
2000 and earlier	1	Muslim-only	16
2001 to 2005	1	Multiple religious groups	20
2006 to 2010	6	Province	
2011 to 2015	8	Newfoundland and Labrador	1
2016 to 2020	20	Prince Edward Island	0
Methodology		Nova Scotia	0
Qualitative	14	New Brunswick	1
Mixed Methods	1	Quebec	2
Quantitative, target sample	14	Ontario	17
Quantitative, representative sample	7	Manitoba	0
Sample Gender		Saskatchewan	0
Women-only	15	Alberta	5
Men-only	0	British Columbia	2
All genders	21	All Canada (unspecified)	8

Turning to study samples of participants, nearly three-quarters (72%) of all studies included diverse samples. The remaining studies focused on Arab (14%), Iranian (3%), or South Asian (11%) Canadians specifically. No studies focused exclusively on Black Canadian Muslims, though two studies categorized as diverse sample studies included a focus on African, Caribbean, and Black Canadians. While a slight majority of studies include samples with all genders (58%), a sizable portion of studies focus on women only (42%). We did not find any studies that focus only on Canadian Muslim men. Slightly over half of the studies include multiple religious groups within the sample (56%) while slightly under half include Muslim-only samples (44%). Nearly half of studies took place in Ontario (47%)—not surprisingly, as Ontario is home to the largest population of Canadian Muslims [4]. Fewer studies took place in Alberta (14%), British Columbia (6%), Quebec (6%), New Brunswick (3%), and Newfoundland and Labrador (3%). The remaining studies included geographically unspecified samples of Canadians (22%).

General Health. In total, there were four studies dedicated to general health, and only one of these [5] included a population-based representative sample. In this quantitative study, which draws on the 2002 Canadian Ethnic Diversity Survey (N=31,683), Dilmaghani [5] explores the relationship between participant religiosity and self-reported wellbeing. She finds that the self-reported wellbeing is positively and strongly associated with religiosity, a composite index of religious salience, religious attendance, and private worship. The relationship is stronger for Canadian Muslims compared to Canadians of other faith affiliations.

The other three studies on general health were qualitative and highlighted the importance of immigration and culture on health. Baker [6] drew on interviews with 26 New Brunswick Canadian Muslims of Middle Eastern, Indian or Pakistani origin to examine cultural safety as related to social health post-9/11. She found that the participants did experience a sharp change from pre-9/11 cultural safety and social integration to post-9/11 cultural risk and racialization. Surprisingly, this was the only study on general health that centered on anti-Muslim or Islamophobic experiences.

The remaining two studies focus on how immigrant Muslim women live out health in their daily lives. Aljaroudi, Horton and Manning [7] utilized a sample of 24 Arab Muslim immigrant mothers to investigate how dietary choices change as a consequence of mothers' acculturation level. They found no significant relationship between acculturation and dietary choices, though they did find children's preferences, time concerns, and availability of Arab food did play salient roles in daily food consumption choices. However, food preparation is important as Dyck and Dossa [8] demonstrate. They drew on a sample of 30 migrant women from British Columbia, Canada, comprised of Indian Sikhs and Afghan Muslims. They explored how these migrant women create healthy space within daily lived experiences (e.g., food preparation and consumption, etc.), with attention to the physical, social, and symbolic aspects of the healthy space.

Table 3. Characteristics of Research Studies on Canadian Muslim Public Health by Outcome of Interest

Author(s)	Publication Year	General Health	Mental Health	Physical Health	Sexual Health	Old Age
Aljaroudi, Horton and Manning	2019	Focal				
Baker	2007	Focal				
Dilmaghani	2018a	Focal				
Dyck and Dossa	2007	Focal				
Ali and Toner	2001		Focal			
Alvi and Zaidi	2019		Focal			
Dilmaghani	2018b		Focal	Focal		
Holtmann and Tramonte	2014		Focal			
Paterson and Hakim-Larson	2012		Focal			
Rousseau, Hassan, Moreau, & Thombs	2011		Focal			
Tuck, Robinson, Agic, Ialomiteanu, & Mann	2017		Focal			
Wu and Schimmele	2019		Focal			
Banerjee, Landry, Zawi, et al.	2017			Focal		
Honarmand, Leigh, Martin, et al.	2020			Focal		
Hussien	2008			Focal		
Pathy, Mills, Gazeley, Ridgley, and Kiran	2011			Focal		
Bottorff, Johnson, Bhagat, et al.	1998				Focal	
Causarano, Pole, Flicker, et al.	2010				Focal	
Jessri, Farmer, and Olson	2012				Focal	
Kerr, Maticka-Tyndale, Bynum, et al.	2017				Focal	
Lofters, Slater, and Vahabi	2018				Focal	
Lofters, Vahabi, Fardad, and Raza	2017				Focal	
Lofters, Vahabi, Kim, et al.	2017				Focal	
Maticka-Tyndale, Shirpak, and Chinichian	2007				Focal	
Mihan, Kerr, & Maticka-Tyndale	2016				Focal	
Read, Carrier, Whitley, et al.	2014				Focal	
Reitmanova and Gustafson	2008				Focal	
Vahabi and Lofters	2016				Focal	
Vahabi, Lofters, Kim, et al.	2017				Focal	
Vahabi, Lofters, Wong, et al.	2019				Focal	
Wiebe, Najafi, Soheil, and Kamani	2011				Focal	
Dossa	2017	Included	Included	Included		Focal
Lai and Suhood	2013	Included	Included	Included		Focal
Salma, Hunter, Oglivie, and Keating	2018			Focal		Focal
Salma, Keating, Oglivie, and Hunter	2017	Included	Included	Included		Focal
Salma and Salami	2019	Included	Included	Included		Focal

Table 4. Characteristics of Research Studies on Canadian Muslim General Health

Author(s)	Publication Year	Methodology	Sample Size	Population	Muslim Only	Geographic Area
Aljaroudi, Horton and Manning	2019	Qualitative, interviews	24	Arab Muslim immigrant mothers	Yes	Kitchener-Waterloo, ON
Baker	2007	Qualitative, interviews	26	Middle Eastern, Indian or Pakistani Muslims	Yes	New Brunswick
Dilmaghani	2018a	Quantitative, CEDS	31,683	Canadian population	No	Canada
Dyck and Dossa	2007	Qualitative, interviews	30	South Asian Sikhs and Afghan Muslims	No	Vancouver, BC

Mental Health. Out of a total of seven articles on Canadian Muslim mental health, four quantitative research studies draw on representative samples. These four studies disaggregate Canadian samples by religious affiliation. Holtmann and Tramonte [9] draw on a female-only sample from the Longitudinal Survey of Immigrants to Canada and find that ethnoreligious background plays a salient role in the mental wellbeing of employed immigrant women. Specifically, they find that employed Canadian Muslim women report high emotional distress compared to women of other ethnoreligious backgrounds, even when controlling for other factors. Rousseau, Hassan, Moreau, & Thombs [10] find that, compared to Montreal-based non-Muslim Arabs and Haitians, Arab Muslims experienced a significant increase in discrimination-related distress between 1998 and 2007. Tuck, Robinson, Agic, Ialomiteanu, and Mann [11] leverage the Centre for Addiction and Mental Health's (CAMH) Monitor survey to investigate the association between risk drinking and religious affiliation, and find Muslim Canadians report the lowest rates of currently or ever drinking alcohol, and, not surprisingly, the lowest risk drinking. Wu and Schimmele [12] find that, among respondents to the 2013 General Social Survey, Canadian Muslims report the highest levels of religious discrimination compared to other groups, yet have comparable mental health outcomes likely because of the value they place on religious salience.

The remaining three studies utilize purposive samples. Two draw on quantitative research methods, while the last leverages qualitative research methods. Ali and Toner [13] draw on a sample of 40 Canadian Muslim men and women to assess the relationship between intimate partner violence (IPV) and self-esteem, and find that higher self-esteem correlates with less support for IPV. Paterson and Hakim-Larson [14] investigate the relationship between cultural orientations and life satisfaction among Canadian Arab youth (N=98). They find that a positive Arab culture orientation relates to greater family life satisfaction, while a positive European Canadian orientation relates to greater school life satisfaction. In a qualitative analysis, Alvi and Zaidi [15] investigate the experiences of LGBTQ Canadian Muslims (N=6), and find that their participants report coping with mental health issues alongside concerns about family obligations as well as religious ambiguity and values.

Table 5. Characteristics of Research Studies on Canadian Muslim Mental Health

Author(s)	Publication Year	Methodology	Sample Size	Population	Muslim Only	Geographic Area
Ali and Toner	2001	Quantitative	40	Canadian Muslims	Yes	Toronto, ON
Alvi and Zaidi	2019	Qualitative, interviews	6	LGBTQ 2nd gen Canadian South Asian Muslims	Yes	Toronto, ON
Dilmaghani	2018b	Quantitative, General Social Survey	23,093	Canadian population	No	Canada
Holtmann and Tramonte	2014	Quantitative, LSIC	3,897	Immigrant Canadian women	No	Canada
Paterson and Hakim-Larson	2012	Quantitative	98	Arab Canadian youth	No	Canada
Rousseau, Hassan, Moreau, & Thombs	2011	Quantitative	1,216	Ministry of Immigration and Cultural Communities	No	Montreal, QC
Tuck, Robinson, Agic, Ialomiteanu, & Mann	2017	Quantitative, CAMH Monitor Survey	16,596	Ontarian Canadians	No	Ontario
Wu and Schimmele	2019	Quantitative, General Social Survey	27,104	Canadian population	No	Canada

Physical Health. Only one of the five studies on physical health utilized qualitative methods. In this qualitative research, Pathy, Mills, Gazeley, Ridgley, and Kiran [16] explore the perspectives of 35 Somali and Bangladeshi Muslim women and health care professionals on fasting and related practices. Specifically, they sought to capture the role of fasting on health and of health professionals during Ramadan. A salient finding is that health care professionals were often unaware about Muslim fasting practices and thus, the medical advice they offer is rejected by Muslim patients.

Table 6. Characteristics of Research Studies on Canadian Muslim Physical Health

Author(s)	Publication Year	Methodology	Sample Size	Population	Muslim Only	Geographic Area
Banerjee, Landry, Zawi, et al.	2017	Quantitative	19	South Asian Muslim women	Yes	Ontario
Honarmand, Leigh, Martin, et al.	2020	Quantitative	1,001	Canadian population	No	Canada
Hussien	2008	Quantitative, experimental	60	Arab Canadian Muslim women	Yes	London, ON
Pathy, Mills, Gazeley, Ridgley, and Kiran	2011	Qualitative, interviews	35	Somali and Bangladeshi Muslim women; health professionals	No	Toronto, ON

The remaining four studies were quantitative, and two of these include Muslim-only samples. Both of the quantitative studies on Muslim-only samples include intervention assessments. Banerjee, Landry, Zawi, Childerhose, Stephens, Shafique, and Price [17] investigate the efficacy of mosque-based workout programs for South Asian Muslim women. With a sample of 19 consenting participants out of 62 women who participated in the program, the researchers found that the intervention did improve participants' self-efficacy, belief in the importance of exercise, aerobic capacity, and functional quality of life. Likewise, in her doctoral dissertation on type 2 diabetes, Hussien [18] draws on a sample of 60 Arab Canadian Muslim women to assess the participants' diabetes risk, identify barriers to health seeking behavior, and investigate the impacts of lifestyle changes (dietary counselling and triweekly exercise) to overcome those barriers and decrease diabetes risk. Using treatment and control groups, Hussien found the intervention significantly beneficial for women as their diabetes risk decreased.

The quantitative studies used multi-religious samples drawn from the general Canadian population. While one treats religiosity as a multi-dimensional measure, the other reduces religion to affiliation. As in her other study [5], Dilmaghani [19] utilizes a composite index of religiosity, comprised of religious salience, religious attendance, and private worship, to identify the relationship between religiosity and mental and physical health outcomes. Drawing on the 2012 Canadian General Social Survey (N=23,093), she found that compared to others, Canadian Muslims self-report excellent mental health more often than Canadians of other faith backgrounds, and that Canadian Muslims have lower incidence of neurological conditions (e.g., Parkinson's disease) compared to others. In a differing study, Honarmand, Leigh, Martin, Sibbald, Nagpal, Lau, Priestap, De, Basmaji, Healey, Dhanani, Weiss, Shemie, and Ball [20] conducted a national public opinion survey (N=1001) to assess perceptions of multiple procedures related to cardiac transplantation, including donation after circulatory determination of death (DCDD), direct procurement and perfusion (DPP), and normothermic regional perfusion (NRP). Compared to Canadians of other faith affiliations, Canadian Muslims had lower acceptance scores for all three procedures.

Sexual and Reproductive Health. A total of fifteen studies focus on Canadian Muslim sexual and reproductive health. A team of researchers based at the University of Toronto contributed six of these studies, which were first authored by Aisha Lofters or Mandana Vahabi and focus on cancer screening and related health outcomes. Lofters, Slater, and Vahabi [21] examine the association between religion and cancer screening among Canadian Muslims and others (N=5311). They find only two significant differences: that Muslims are more likely to prefer non-English languages for spoken communication, and that Muslim women were more likely to be current with breast cancer screening. However, in an earlier study [22], they find that women born in Muslim-majority countries, especially those in the Sub-Saharan, had lower breast cancer screening uptake. In the earlier study, the researchers draw on the population of all women eligible for breast cancer screening in Ontario (N=1,851,834), arguably more representative than the sample in the latter study. Though the researchers note that there was much variance between women born in Muslim-majority countries, implying the role of religion is unclear, they again find unfavorable health outcomes for those born in Muslim majority countries, including Pap testing [23] and fecal occult blood testing [24].

Table 7. Characteristics of Research Studies on Canadian Muslim Sexual and Reproductive Health

Author(s)	Publication Year	Methodology	Sample Size	Population	Muslim Only	Geographic Area
Bottorff, Johnson, Bhagat, et al.	1998	Qualitative, interviews	50	South Asian Canadian women	No	Canada
Causarano, Pole, Flicker, et al.	2010	Quantitative, Toronto Teen Survey	1,216	Toronto teenagers	No	Toronto, ON
Jessri, Farmer, and Olson	2012	Qualitative, interviews	22	Middle Eastern immigrant mothers	Yes	Edmonton, AB
Kerr, Maticka-Tyndale, Bynum, et al.	2017	Quantitative	250	Single, 16- to 27-year old, heterosexual ACB	No	Windsor, Ontario
Lofters, Slater, and Vahabi	2018	Quantitative	5,311	All patients from multi-site urban family practice	No	Toronto, ON
Lofters, Vahabi, Fardad, and Raza	2017	Quantitative	30	Canadian Muslim immigrant women	Yes	Toronto, ON
Lofters, Vahabi, Kim, et al.	2017	Quantitative, population-based study	761,019	All cervical-screening eligible women	No	Ontario
Maticka-Tyndale, Shirpak, and Chinichian	2007	Qualitative, interviews	20	Iranian Canadians	Yes	Windsor, ON
Mihan, Kerr, & Maticka-Tyndale	2016	Quantitative	510	African, Caribbean, or Black youth	No	Windsor, ON
Read, Carrier, Whitley, et al.	2014	Qualitative, interviews	32	Heterosexual infertile couples	No	Montreal, QC
Reitmanova and Gustafson	2008	Qualitative, interviews	6	Immigrant Canadian Muslim women	Yes	St. John's, NL
Vahabi and Lofters	2016	Mixed methods	30	Canadian Muslim immigrant women	Yes	Toronto, ON
Vahabi, Lofters, Kim, et al.	2017	Quantitative, population-based study	1,851,834	Breast cancer screening-eligible women	No	Ontario
Vahabi, Lofters, Wong, et al.	2019	Quantitative, population-based study	3,692,291	FOBT eligible Canadians	No	Ontario
Wiebe, Najafi, Soheil, and Kamani	2011	Quantitative	53	Canadian Muslim women seeking abortion	Yes	Canada

In addition to retrospective population based studies and quantitative survey analysis, the team also draws on qualitative methods. Lofters, Vahabi, Fardad, and Raza [25] explore 30 Canadian Muslim immigrant women's cervical cancer screening practices, knowledge, and attitudes relating to HPV self-sampling. They found that over half of the sample reported misinformation regarding PAP tests (e.g., that PAP tests may cause cervical infection), and nearly half reported feeling that the test invades their privacy. Not surprisingly, the majority of women report that they would prefer self-sampling. In an earlier report using the same data, Vahabi and Lofters [26] highlight the need for better education and access to health services among immigrant Muslim women.

Another set of collaborators focus on HIV and sexual health in Windsor, Ontario, and contribute three studies of the fifteen in this section. In a qualitative study drawing on interviews with 20, assumedly all-Muslim, Iranian Canadians, Maticka-Tyndale, Shirpak, and Chinichian [27] found that participants' Muslimness played a salient role in their experiences of sex and sexual health seeking behavior. In more recent studies, the team utilizes survey data. Mihan, Kerr, Maticka-Tyndale, and the African, Caribbean, and Black Youth Team [28] draw survey responses of 510 African, Caribbean, and Black Canadian youth to assess the effects of religious identity and practice, time in Canada, HIV/AIDS knowledge and testing history, sexual health service contact, and gender on HIV-related stigma. They find that African-Muslim participants report higher levels of stigma, lower levels of knowledge, and lower rates of HIV testing compared to other ethno-religious groups. Likewise, Kerr, Maticka-Tyndale, Bynum, Mihan, and the African, Caribbean, and Black Youth Team [29] investigate contributors to HIV vulnerability and variations in sexual behavior across groups based on sociodemographic differences, including ethno-religious identity among 250 African, Caribbean, and Black Canadians. The researchers found only one religious difference between Muslims and others: that African-Muslim participants experience lower HIV vulnerability.

Of the remaining six studies, five engage qualitative methods. In the one quantitative data study, Causarano, Pole, Flicker, Flynn, Layne, Larkin, Travers, Palmer, Schwartz, McIlroy, Guta, and Salehi [30] assessed the religious differences in the interest and knowledge of sexual health among Toronto-based teens (N=1216). Out of a possible eight sexual health topics, the research team found only one significant difference between Muslim teens and others: Muslims were less likely to report an interest in learning more about sexual health than those identifying no religion.

The finding that Islam did not play a unique role vis-à-vis other religions was echoed in qualitative studies. For example, Bottorff, Johnson, Bhagat, Grewal, Balneaves, Clarke, and Hilton [31] did not find religious differences in a qualitative study of 50 South Asian Canadian women focusing on their breast health practices. The women framed their experiences in culturally similar themes. Likewise, Read, Carrier, Whitley, Gold, Tulandi, and Zekowitz [32] explore the use of complementary and alternative medicine (CAM) among 32 heterosexual

infertile couples and find that religiosity plays a salient role CAM. While the researchers do not offer categorical comparisons by religious affiliation given similarities across religious groups, it is noteworthy that all eight of their Muslim identified participants opted for non-Western, as opposed to Western, fertility treatment.

The remaining three studies focus on immigrant Muslim women, and provide different recommendations at multiple levels of the health care system. Reitmanova and Gustafson [33] explore the maternity health care needs and barriers among 6 immigrant Canadian Muslim women. Based on their findings, the researchers recommend changes to the health care system and services in order to overcome the significant barriers immigrant Muslim women face when accessing maternity health care. Wiebe, Najafi, Soheil, and Kamani [34] surveyed 53 Canadian Muslim women presenting for abortion on their attitudes, beliefs, and experiences. They found that women who were less pro-choice experienced higher anxiety and guilt compared to more pro-choice women, and those who believe strongly that abortion is contrary to Islamic principles experienced even higher scores of anxiety and guilt. Nonetheless, the researchers conclude that the women's religious beliefs and views were very diverse, and thus avoided making any generalizations about the women. Jessri, Farmer, and Olson [35] explore Middle-Eastern mothers' experiences and perceptions of breastfeeding and its social and cultural meanings, and find that religious beliefs, which were thematically woven through the women's discussions, was the most salient determinant in women's choice to breastfeed.

Old Age. Regardless of methodology employed, all studies on old age also included attention to physical and mental health. Only one of the five studies on old age employed quantitative methods: Lai and Surood [36] drew on a random sample of 220 South Asian Canadians in Calgary, Canada, 20% of which identified as Muslim. The researchers found that Muslim Canadians report poorer physical health than their Hindu counterparts, all else being held equal. This health disparity held true only for physical, and not mental, health. The main finding Lai and Surood offer is that of the different service barriers, only personal attitudes significantly affect physical and mental health. However, what remains uninvestigated is how the relationship between personal attitudes and health outcomes may differ for different religious groups—e.g., how this relationship plays out for Canadian Muslims vis-à-vis participants of other faith backgrounds.

The remaining four studies were qualitative and thus provided a narrative approach to old age and health. For example, one study provided an ethnographic window into the systemic and social processes of Canadian Muslims accessing palliative care in Vancouver, Canada [37]. Across all four qualitative studies on old age, researchers focused on barriers to health seeking behavior and found social supports to be a vital resource. The remaining three qualitative studies are by Jordana Salma and her research associates. Salma, Hunter, Oglivie,

and Keating [38] drew on a sample of 16 Arab Muslim immigrant women and found that stroke prevention behavior was influenced by the women's economic status, transportation access and mobility, language fluency, chronic stressors, and coping strategies. In another study, Salma, Keating, Oglivie, and Hunter [39] drew on (possibly the same) sample of 16 Arab Muslim immigrant women and found that social dimensions of health, including social connectedness, social roles and social support, are key in women's experiences of barriers and facilitators to healthy aging. Likewise, Salma and Salami [40] interviewed 67 older adults and stakeholders from several Canadian Muslim communities and also found salience around old age health and its relationship with social isolation and loneliness.

Table 8. Characteristics of Research Studies on Canadian Muslim Old Age

Author(s)	Publication Year	Methodology	Sample Size	Population	Muslim Only	Geographic Area
Dossa	2017	Qualitative, ethnography	25	Iranians and Ismailis	Yes	Vancouver, BC
Lai and Surood	2013	Quantitative	220	Elderly South Asians	No	Calgary, AB
Salma, Hunter, Oglivie, and Keating	2018	Qualitative, interviews	16	Elderly immigrant Arab Muslim women	Yes	Urban center, AB
Salma, Keating, Oglivie, and Hunter	2017	Qualitative, interviews	16	Elderly immigrant Arab Muslim women	Yes	Urban center, AB
Salma and Salami	2019	Qualitative, interviews	67	South Asian, Arab, and African Muslim	Yes	Edmonton, AB

Discussion

The studies included in this review focus on health-related items, include Canadian Muslims, and are limited to Canadian-based contexts. It is noteworthy that many of these studies operate from an assumed Muslim exceptionalism that shapes the methodologies and analyses. Muslim exceptionalism, coined by sociology of race and religion expert Abdolmohammad Kazempur [41], refers to the way Muslims in Canada (and other migrant contexts) are framed as being uniquely unassimilable. Rather than taking into account the structural inequities and discriminatory practices Canadian Muslims are confronted by, particularly after September 11th, many researchers, policy makers, and service providers frame Muslims as the authors of their own poor socioeconomic outcomes, some also blaming Islam and Muslim cultures.

A similar phenomenon appears to manifest in health care and research as well: a number of the studies we reviewed, both those included and excluded from the current analysis, assumed diasporic Muslim health would be poor, and the assumption was justified by Muslim religiocultural practices rather than Islamophobia or insensitive health care systems. How-

ever, a number of studies also provide empirical evidence to debunk this Muslim health exceptionalism, for example by demonstrating poor health is a function of external and systemic factors (e.g., unemployment and labor market inactivity [42]). As a process of knowledge production, the creation of Muslim health exceptionalism is depicted in Figure 2 below. The process starts with a lack of high-quality data available on Canadian Muslims, especially regarding their health, which creates a hurdle for researchers. The lack of high-quality data and research translates to a lack of empirically-based, culturally sensitive resources, and this may explain the poor uptake of these resources that researchers identify, in turn perpetuating barriers to health care access and health-seeking behaviors. Inevitably, this results in poor health outcomes for Canadian Muslims, and Muslim health exceptionalism is reified.

The lack of high-quality representative data on health-related items among Canadian minorities is a reflection of Canada's general data collection practices critiqued elsewhere [4]. Notably, a number of studies excluded from this review utilize the Canadian Community Health Survey (CCHS), which draws on a representative sample of Canadians and is a preferred data source for many Canadian public health researchers. However, the CCHS does not measure religiosity nor religious affiliation.

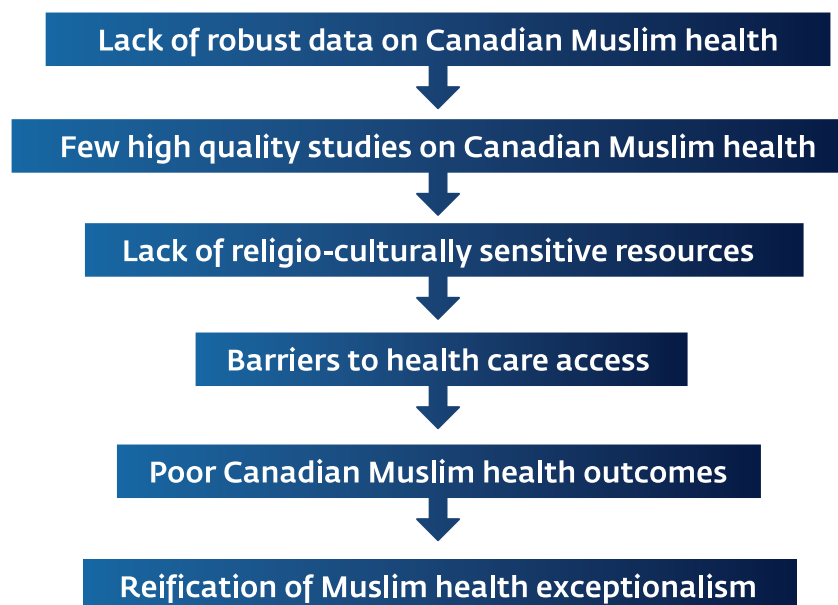
In turn, researchers struggle to fill the data gaps by relying on ethnicity or diversity surveys that include measures of religiosity and health, but these surveys are sometimes outdated by over a decade and/or include general, nonspecific measures of health [5]. Alternatively, they might use ethnicity or country of origin as a proxy for religious affiliation [23]. However, evidence indicates that health-related outcomes do differ by religion within homogenous ethnic samples for Canadians identifying as Black [43,44] and South Asian [31,36]). Thus, the quality of these studies is compromised because of the lack of access to high quality, representative data on Canadian Muslims and other minorities.

As depicted in Figure 2, the scarcity of Canadian Muslim health data and research translates to a lack of empirically-based culturally sensitive resources. Researchers may offer interventions without empirical evidence; rather, they offer interventions based on the assumption that Muslims would reject health care options because of religious beliefs (e.g., with accepting donor breast milk [45]). In other words, rather than surveying the Canadian Muslim population on their attitudes and practices regarding a certain health intervention, the researchers present Islamic rulings and conclude Canadian Muslims might adhere to the rulings rather than medical advice. While religion does play a role in reducing some forms of health-risk behavior—including promiscuous sex, alcohol consumption, and illicit drug use—research also demonstrates that Canadian Muslims find room to negotiate religious edicts for health seeking behavior, as in the case of modest Muslim women who engage in physical exercise [46].

For decades now, researchers have documented the importance of culturally sensitive services to be especially useful for migrant Muslim care recipients [47]. Despite this, Ontario and Alberta are the only Canadian provinces to provide ethno-specific services for

immigrant populations, and none of the ethno-specific services accommodate Canadian Muslims [48]. However, even when available, culturally sensitive models of care are often underutilized [49], which may be a consequence of the quality of the services—which, again, are a reflection of the quality and availability of data and research. The lack of quality services enabling Canadian Muslim access to health care and health seeking behavior results in poor health outcomes for Canadian Muslims. Thus, Muslim health exceptionalism is reified.

Figure 2. Production Process of “Muslim Health Exceptionalism”



Implications

This scoping review investigated extant research on Canadian Muslim health. We found 36 research studies utilizing diverse methodological approaches to Canadian Muslim general health, mental health, physical health, sexual and reproductive health, and old age. Based on thematic analysis, we conceptualized the creation of Canadian Muslim health exceptionalism, or the methodological artifact driving an assumption that poor Canadian Muslim health is due to Muslimness. Based on these findings, we offer the following research, policy, and practice implications:

Research Implications

Goal: Further research needed to uncover the systemic barriers and structural inequities confronting Canadian Muslims and other religious minorities traversing health care services.

Action: Include religiosity measures in health surveys.

Goal: Identify possible psychological, social, or religious resources Canadian Muslims may be utilizing to buffer the effects of stress.

Action: More inductive approaches to engage Canadian Muslims about their everyday lives to determine what role, if any, religion plays in their mental health.

Goal: An evidence-based understanding of Canadian Muslim sexual health and everyday life.

Action: More inductive approaches to engage Canadian Muslims about their sexual health.

Policy Implications

Goal: Ensure the most vulnerable populations, e.g. the isolated elderly, have the supports they need for positive health outcomes and quality of life.

Action: Religious, health, and social service providers could collaborate on programs and resources to keep elderly Canadian Muslims and other ethnoreligious minorities socially engaged in their local communities.

Practice Implications

Goal: Health care workers to provide religioculturally informed professional advice useful to their Muslim patients to bridge the healthcare gap.

Action: Equip health care workers with empirically-based and sensitive resources and partner with community centers or organizations.

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APPENDIX: PUBLICATION ABSTRACTS

1. General Health

Aljaroudi, Horton and Manning (2019)

Canadian Journal of Dietetic Practice and Research

N=24

Purpose: The purpose of this work was to assess Arab Muslim immigrant mothers' acculturation level, to explore apparent links between acculturation level and experiences of dietary changes, and to gather information on factors affecting dietary acculturation. **Methods:** Semi-structured individual interviews focusing on food choices were conducted with 24 mothers who had been in Canada 5 years or more. An adapted version of an existing acculturation scale was used to assess participants' perception of their own acculturation. **Results:** Arab Muslim mothers retain traditional food preparation. However, several factors led to changes in their daily food consumption such as children's preferences, time concerns, and availability of Arabic food. No significant relation was found between measured levels of acculturation and the adoption of Canadian food behaviour or the retention of preparation and consumption of traditional foods (dietary acculturation); however, a greater length of stay in Canada was somewhat associated with limitations on preparing traditional food. The findings indicated that many of the Arab Muslim mothers interviewed retain important aspects of their traditional cuisine. **Conclusions:** Dietary acculturation for Arab Muslim immigrants to Canada involved a balance between carrying forward food-related traditions and adapting to Canadian culture, including Canada's food culture.

Baker (2007)

JAN Original Research

N=26

Aim. This paper reports a study the aim of which was to further understanding of cultural safety by focusing on the social health of a small immigrant community of Muslims in a relatively homogeneous region of Canada following the terror attacks on 11 September 2001 (9/11). **Background.** The aftermath of 9/11 negatively affected Muslims living in many centers of Western Europe and North America. Little is known about the social health of Muslims in smaller areas with little cultural diversity. Developed by Maori nurses, the cultural safety concept captures the negative health effects of inequities experienced

by the indigenous people of New Zealand. Nurses in Canada have used the concept to understand the health of Aboriginal peoples. It has also been used to investigate the nursing care of immigrants in a Canadian metropolitan centre. Findings indicated, however, that the dichotomy between culturally safe and unsafe groups was blurred. Method. The methodology was qualitative, based on the constructivist paradigm. A purposive sample of 26 Muslims of Middle Eastern, Indian or Pakistani origin and residing in the province of New Brunswick, Canada were interviewed in 2002–2003. Findings. Participants experienced a sudden transition from cultural safety to cultural risk following 9/11. Their experience of cultural safety included a sense of social integration in the community and invisibility as a minority. Cultural risk stemmed from being in the spotlight of an international media and becoming a visible minority. Conclusion. Cultural risk is not necessarily rooted in historical events and may be generated by outside forces rather than by longstanding inequities in relationships between groups within the community. Nurses need to think about the cultural safety of their practices when caring for members of socially disadvantaged cultural minority groups as this may affect the health services delivered to them.

Dilmaghani (2018a)

Journal of Happiness Studies

N=31,683

Using the Canadian Ethnic Diversity Survey, I explore how religiosity associates with self-reported levels of wellbeing. The overall association of religious intensity with subjective wellbeing is found to be statistically significant, positive and small. When the impact is allowed to vary by religious group, it appears that Catholics and Protestants are very similar in how religiosity impacts their subjective wellbeing; the association is statistically significantly stronger for Canadian Muslims; and Canadian Jews are the closest group to religious nones. Surprisingly, among different dimensions of religious commitment, the intensity of religious belief is found to be the driver of the overall positive association, across religious groups. Finally, when Canadian population is divided into linguistic groups, religious involvement emerges as a negative predictor of French Canadians' subjective wellbeing.

Dyck and Dossa (2007)

Health & Place

N=30

This paper contributes to recent literature that considers the role of everyday activity in constructing 'healthy space', specifically exploring the tension between agency and structural processes in explanation. The focus is a comparison of two groups of migrant women in

British Columbia, Canada: South Asian Sikhs from Punjab, India, and Afghan-Muslim refugees. It explores the routine practices whereby they work to create 'healthy space' as they orchestrate their families' health. Through food preparation and consumption practices, traditional healing and religious observance, the women delineate the physical, social and symbolic dimensions of healthy space. The women's narratives demonstrate the productive capacity of everyday routines in forging healthy space within the particularities of migrant settlement.

2. Mental Health

Ali and Toner (2001)

The Journal of Social Psychology

N=40

This study was designed (a) to assess attitudes toward wife abuse in a sample of Muslim women and men in Canada and (b) to assess whether those attitudes were influenced by self-esteem. Results suggested that, as in general North American samples, the Muslim women and men did not differ from each other on levels of self-esteem. Also consistent with general North American samples, the Muslim women's and men's attitudes toward wife abuse were related to their self-esteem, with higher self-esteem scores predicting stronger attitudes against wife abuse, independent of gender. However, the results also revealed that the Muslim men had significantly more lenient attitudes toward wife abuse compared with the Muslim women and with North American norms.

Alvi and Zaidi (2019)

Journal of Homosexuality

N=6

Little is known about the lived experiences of Lesbian, Gay, Bisexual, Transgendered and Queer (LGBTQ) Muslims living in Canada. Using an intersectional theoretical perspective and a qualitative methodology, this paper examines key themes emerging in the stories of six LGBTQ Muslim women and men living in Canada. The key themes emerging in this research were the tension between perceived family obligations and religious values, the ambiguous relationship with Islam, and coping with mental health issues. The research points to the importance of understanding such experiences as occurring in a matrix of identities and processes, as postulated by intersectionality theory.

Holtmann and Tramonte (2014)

Journal of International Migration and Integration

N=3897

The challenges of the settlement process can at times give way to persistent feelings of sadness, loneliness, and despair for immigrant women. Based on analysis of the Longitudinal Survey of Immigrants to Canada, this article shows that immigrant women's self-reported experiences of mental health vary at arrival and over the course of the settlement process because of the intersection of pre- and post-migration factors. The results show how ethnic origins and religious differences intersect with women's main activities in Canada and influence multiple mental health trajectories. Immigrant women strategically pursue different post-migration pathways because some are more likely to find the social interactions of employment contexts emotionally distressing while for others shouldering responsibilities for full-time care work in the home leads to mental health problems. Still others who study to retrain or get a Canadian degree find the experience detrimental to their emotional health. However, these very same activities can be conducive to mental well-being for women with different ethno-religious backgrounds. The results illustrate that the intersection of ethnicity, religion, and gender in a stratified Canadian society is complex and produces a range of mental health outcomes. Concerns are raised about the high emotional toll of racialized Canadian workplaces and the stress that some employed Muslim women report. An awareness of influences on immigrant women's mental health can assist employers and public service providers as well as members of cultural associations and religious groups in providing appropriate social support for them in the early months and years after arrival.

Paterson and Hakim-Larson (2012)

Journal of Multicultural Counseling and Development

N=98

Results from 98 Arab youth in Canada showed that having a positive Arab culture orientation was related to greater family life satisfaction with family social support as a mediator. A positive European Canadian orientation was related to greater school life satisfaction, but this relation was not mediated by friend social support. Implications for the processes of enculturation and acculturation are discussed.

Rousseau, Hassan, Moreau, & Thombs (2011)

American Journal of Public Health

2 samples: one recruited in 1998 (n = 784) and the other in 2007 (n = 432)

Objectives. We compared the evolution of perception of discrimination from 1998 to 2007 among recent Arab (Muslim and non-Muslim) and Haitian immigrants to Montreal; we also studied the association between perception of discrimination and psychological distress in 1998 and 2007. **Methods.** We conducted this cross-sectional comparative research with 2 samples: one recruited in 1998 (n = 784) and the other in 2007 (n = 432). The samples were randomly extracted from the registry of the Ministry of Immigration and Cultural Communities of Quebec. Psychological distress was measured with the Hopkins Symptom Checklist-25. **Results.** The perception of discrimination increased from 1998 to 2007 among the Arab Muslim, Arab non-Muslim, and Haitian groups. Muslim Arabs experienced a significant increase in psychological distress associated with discrimination from 1998 to 2007. **Conclusions.** These results confirm an increase in perception of discrimination and psychological distress among Arab Muslim recent immigrant communities after September 11, 2001, and highlight the importance this context may have for other immigrant groups.

Tuck, Robinson, Agic, Ialomiteanu, & Mann (2017)

Journal of Religion and Health

N=16,596

This research examines (1) the association between risk drinking and religious affiliation and (2) differences between religions for risk drinking among adults living in Ontario, Canada, for Christians, Buddhists, Sikhs, Muslims, Hindus, Jews, other religious groups and the non-religious. Data are based on telephone interviews with 16,596 respondents and are derived from multiple cycles (2005–2011) of the Centre for Addiction and Mental Health's (CAMH) Monitor survey, an ongoing cross-sectional survey of adults in Ontario, Canada, aged 18 years and older. Data were analysed using bivariate cross-tabulations, Mann–Whitney U nonparametric test and logistic regression. Alcohol use and risk drinking occur among members of all religious groups; however, the rate of drinking ranges widely. Risk drinking is significantly associated with religion. When compared to the No religion/Atheist group, several religious groups (Baptist, Christian, Hindu, Jehovah's Witness, Jewish, Muslim/Islam, Non-denominational, Pentecostal, Sikh and Other religion) in our sample have significantly lower odds of risk drinking. Risk drinkers also attended significantly fewer services among several religions. Results suggest that there are differences in the risk drinking rates among Canadian adults, living in Ontario, by religion. It appears that religious traditions of prohibition and abstention do hold sway among Canadian adults for some religious groups.

Wu and Schimmele (2019)

Ethnicity & Health

N=27,104

Objectives Most knowledge on the health consequences of discrimination comes from studies on racial/ethnic minorities, and research on religious discrimination is rare. To address this gap in knowledge, we examine the relationship between religious discrimination and self-rated mental health (SRMH), focusing on the role of religious affiliation as well as religious participation and the importance of religion/spirituality. **Methods** The empirical analysis uses cross-sectional data from Statistics Canada's 2013 General Social Survey (GSS-27) and the target population includes Canadians aged 15 and older (N = 27,104) from all 10 provinces. The outcome variable is SRMH. Using OLS regressions, we compare the consequences of religious discrimination across five major religious groups (Christian, Buddhist, Hindu, Jewish, and Muslim), controlling for racial status and other confounding variables, and examining moderating factors. **Results:** Religious discrimination is harmful for the SRMH of all religious groups. Despite experiencing higher levels of religious discrimination, religious minorities have no worse SRMH than the Christian majority, with the exception of Buddhists, who fare worse. The magnitude of the relationship between religious discrimination and SRMH differs across religious groups. **Conclusion:** Religious discrimination is a threat to mental health, irrespective of religious affiliation. There is a need to disaggregate non-Christian groups into distinct groups in studies of religious discrimination.

3. Physical Health

Banerjee, Landry, Zawi, Childerhose, Stephens, Shafique, and Price (2017)

Journal of Immigrant and Minority Health

N=62

Low levels of physical activity have been reported in South Asian Muslim women. Mosques could be beneficial in providing physical activity opportunities for Muslim women. This study examined the feasibility, acceptability and effectiveness of a mosque-based physical activity program for South Asian Muslim women in Canada. Sixty-two South Asian Muslim women participated in a 24-week mosque-based exercise intervention. Feasibility, acceptability and effectiveness of the program was evaluated by pre-post survey questions from the Duke Activity Status Index (DASI) and International Physical Activity Questionnaire among 28 women who consented to the research data collection. Nineteen women were assessed pre- and post-intervention. The women demonstrated increase in median scores of self-efficacy

(90 pre vs. 100 post; $p = 0.004$) and the importance of engaging in regular physical activity (90 pre vs. 100 post; $p = 0.01$). Fewer participants were classified as inactive at the end of the intervention (42 % pre vs. 10 % post; $p = 0.006$). There was a mean increase in DASI scores (39.2 pre vs. 44.6 post; $p = 0.06$) reflecting an improvement in peak aerobic capacity and functional quality of life. Culturally relevant structured networks such as mosques are important assets when designing healthy lifestyle interventions for South Asian Muslim women.

Dilmaghani (2018b)

Journal of Immigrant and Minority Health
N=23,093

In the past few decades, most new immigrants to Canada have originated from non-Christian countries. During the same period, the unaffiliation rates have sharply increased in Canada. This paper investigates whether there are any health inequalities associated with religious identity, including also the individuals who do not identify with organized religion in the analysis. The study uses the Canadian General Social Survey of 2012 (N = 23,093), focused on Caregiving and Care-receiving. Employing multivariate regression analysis and controlling for a large set of characteristics inclusive of the degree of religious commitment, individuals who identify as Protestant are found at a physical and mental health advantage, compared with Roman Catholics and most other groups. On the other hand, individuals who identify as Jehovah's Witnesses are found at a considerable physical health disadvantage. Among the unaffiliated individuals, those who have retained some ties with organized religion without formally identifying with it are found at a mental health disadvantage compared with all religious groups, as well as the secular individuals who are strictly committed to their nonreligious views. Possible causes and various implications are discussed.

Honarmand, Leigh, Martin, Sibbald, Nagpal, Lau, Priestap, De, Basmaji, Healey, Dhanani, Weiss, Shemie, & Ball (2020)

Canadian Journal of Anaesthesia
N=1001

Purpose Cardiac transplantation is a definitive therapy for end-stage heart failure, but demand exceeds supply. Cardiac donation after circulatory determination of death (cardiac DCDD) can be performed using direct procurement and perfusion (DPP), where cardiac activity is restored after heart recovery, or (NRP), where brain blood supply is surgically interrupted, circulation to the thoraco-abdominal organs is restored within the donor's body, followed by heart recovery. While cardiac DCDD would increase the number of heart donors, uptake of programs has been slowed in part because of ethical concerns within the

medical community. These debates have been largely devoid of discussion regarding public perceptions. We conducted a national survey of public perceptions regarding cardiac DCDD. **Methods** We surveyed 1,001 Canadians about their attitudes towards cardiac DCDD using a rigorously designed and pre-tested survey. **Results** We found that 843 of 1,001 respondents (84.2%; 95% confidence interval [CI], 81.8 to 86.3) accepted the DPP approach, 642 (64.1%; 95% CI, 61.1 to 67.0) would agree to donate their heart using DPP, and 696 (69.5%; 95% CI, 66.6 to 72.3) would consent to the same for a family member. We found that 779 respondents of 1,001 respondents (77.8%; 95% CI, 75.1 to 80.3) accepted the NRP approach, 587 (58.6%; 95% CI, 55.5 to 61.6) would agree to donate their heart using NRP, and 636 (63.5%; 95% CI, 60.5 to 66.4) would consent to the same for a family member. Most respondents supported the implementation of DPP (738 respondents or 73.7%; 95% CI, 70.9 to 76.3) and NRP (655 respondents or 65.4%; 95% CI, 62.4 to 68.3) in Canada. **Conclusion** The results of this national survey of public attitudes towards cardiac DCDD will inform the implementation of cardiac DCDD programs in a manner that is consistent with public values.

Hussien (2008)

Doctoral dissertation, The University of Western Ontario

N=60

Type 2 diabetes mellitus is a serious and costly public health concern. The increase in the prevalence of this disease can mainly be attributed to increasingly sedentary lifestyle and excess energy intake, which in turn lead to overweight and obesity. These modifiable lifestyle-related risk factors offer a possibility for preventive interventions, yet little conclusive evidence regarding the prevention of type 2 diabetes has been demonstrated in minority populations. There were three objectives to the present dissertation. The first objective was to compile nutrition and physical activity profiles of Arab Canadian Muslim women (ACMW) and to assess their risk of developing type 2 diabetes. Measurements of body mass index, waist-to-hip ratio and waist circumference together with nutrition and activity profiles obtained from 3-day food records and pedometers, were collected to assess risk factors. Daily physical activity of ACMW was classified as sedentary to low active and their dietary intake of macronutrients is higher than the values recommended by Canada's Food Guide to Healthy Eating. These data, together with measurements of a high body mass index, waist-to-hip ratio and a large waist circumference suggest that ACMW are a high risk group for the development of type 2 diabetes. The second objective was to investigate the five stages of change for physical activity and to identify potential barriers preventing ACMW from exercising. The present study suggests that lack of places to exercise, cost, and time issues are the key barriers to physical activity faced by ACMW. These results suggest that specific minority groups should be given culturally sensitive interventions to overcome these barriers to improve health-related fitness. The third objective was to investigate the impact of lifestyle changes on reducing modifiable risk

factors for type 2 diabetes by overcoming the identified barriers to exercise and by promoting healthy nutrition and exercise for this population group. Women (N=60) with a family history of type 2 diabetes, who were overweight or obese (body mass index ≥ 25 kg/m²) had been in Canada more than 10 years, (aged 20-55 at baseline), had mild hypertension, impaired glucose tolerance, or previous gestational diabetes (including giving birth to babies 9 lb or more), and a sedentary lifestyle were included in the study. The participants were randomly allocated either to an intensive lifestyle intervention group or a control group. The participants in the intervention group received dietary counselling and an exercise program consisting of endurance, flexibility and strength activities, which ran three times a week in the London Muslim Mosque gym. The lifestyle intervention induced several beneficial changes in anthropometric measurements, physical activity, diet, cardiovascular fitness and fasting blood glucose measurements and a highly significant reduction in diabetes risk factors. For example, they increased their daily steps by 136% and reduced their body weight by 6.5% from baseline. In addition, they decreased their energy intake, carbohydrates, fat, protein, and sodium by 33%, 28%, 26%, 25%, 56%, respectively, and increased fibre, water, vitamin C, vitamin B12, iron and calcium by 58%, 33%, 10%, 68%, 12%, 12%, respectively. In conclusion, the present series of studies are unique in that the intervention was performed in a culturally sensitive manner. The initiative was highly supported by the community and was conducted in the Mosque at weekly prayer sessions by trained members of the community in the participants' own language. There is a growing need, in Canadian society, for the introduction of similar culturally sensitive diabetes prevention programs with sound evaluation strategies. Keywords: obesity, physical activity, diet, lifestyle, prevention, risk factors, type 2 diabetes, Arab Canadian Muslim women, barriers.

Pathy, Mills, Gazeley, Ridgley, and Kiran (2011)

Ethnicity & Health

N=35

Objective. To explore perspectives of health care professionals and female Somali and Bangladeshi Muslim women on practices related to fasting during Ramadan, the impact of fasting on health and the role of health professionals during Ramadan. **Design.** A cross-sectional qualitative study was conducted. Two culturally specific focus groups were conducted with six Somali and seven Bangladeshi Muslim women who observed Ramadan and lived in an inner-city neighbourhood of Toronto, Canada. Individual semi-structured interviews were conducted with 22 health care professionals practicing in this inner-city area (three of whom were Muslim). Data were analysed using thematic qualitative analysis. **Results.** Both Muslim women and health care professionals recognised the spiritual significance of the Ramadan fast. Muslim participants considered the fast to be beneficial to health overall, whereas health care professionals tended to reflect on health concerns from fasting. Many health care professionals were not fully aware of fasting practices during

Ramadan and some found it challenging to counsel patients about the health effects of fasting. Muslim women expressed disagreement regarding which medical interventions were permitted during fasting. They generally agreed that health care professionals should not specifically advise against fasting, but instead provide guidance on health maintenance while fasting. Both groups agreed that guidelines developed by the health care and faith communities together would be useful. Conclusion. There are a variety of health beliefs and observances among female Muslim Somali and Bangladeshi women and a range of knowledge, experience and opinions among health care professionals related to fasting during Ramadan and health. Overall, there is a need for improved communication between members of the Muslim community and health professionals in Canada about health issues related to fasting during Ramadan. Strategies could include published practice guidelines endorsed by the Muslim community; patient education materials developed in collaboration with health and religious experts; or further qualitative research to help professionals understand the beliefs and observances of Muslim people.

4. Sexual Health

Bottorff, Johnson, Bhagat, Grewal, Balneaves, Clarke, and Hilton (1998)

Soc. Sci. Med.

N=50

Breast cancer is becoming a major concern for many South Asian women. Clinical observations of women from a South Asian community living in Canada revealed an under use of early detection strategies. The purpose of this qualitative ethnoscience study was to examine breast health practices from the perspective of South Asian women to provide a foundation for the development of culturally suitable breast health services for this group. Open-ended interviews were conducted with a convenience sample of 50 South Asian women over the age of 30 who had not been diagnosed with breast cancer. Adequate representation of the main religious groups (i.e. Sikh, Hindu, Muslim and Christian) was ensured through sampling techniques. Analysis of translated interviews involved identification of themes and the development of a taxonomy to represent relationships among emerging cultural themes and domains. Four central domains of beliefs related to breast health practices were identified: beliefs about a woman's calling, beliefs about cancer, beliefs about taking care of your breasts and beliefs about accessing services. These beliefs hold important implications for how health promotion strategies should be structured and offered. In particular, attention must be paid to the language that is used to talk about breast cancer, the importance of the role of the family in women's health decisions and traditions related to using narratives to share information and advice.

Causarano, Pole, Flicker, Flynn, Layne, Larkin, Travers, Palmer, Schwartz, McIlroy, Guta, & Salehi (2010)

Canadian Journal of Human Sexuality

N=1216, not representative sample

This study utilized data from the Toronto Teen Survey to examine the sexual health topics that respondents had received information about and the topics they did or did not want to learn more about. Given the diverse sample of youth participating in the study, we placed particular emphasis in the current analysis on associations between religious affiliation and having received information on eight different sexual health topics, and the desire to learn more about the same topics. Overall, there were few associations of religious affiliation with either topics youth had received information about or with topics they wanted to learn more. Protestant youth were more likely than those with no religious affiliation to have received information about sexually transmitted infections. Muslim youth were less likely to express a desire to learn more about sexual health than those identifying no religion. Gender and age differences in sexual health topics that youth had received information about and topics they wanted to learn more about were also examined.

Jessri, Farmer, and Olson (2012)

Maternal and Child Nutrition

N=22

The aim of this study was to explore from the Middle-Eastern mothers' perspective, the experience of breastfeeding and their perceptions of attributes of the health care system, community and society on their feeding decisions after migration to Canada. New immigrant mothers from the Middle East (n = 22) were recruited from community agencies in Edmonton, Canada. Qualitative data were collected through four focus groups using an ethnographic approach to guide concurrent data collection and analysis. Survey data were collected on socio-demographic characteristics via pre-tested questionnaires. All mothers, but one who was medically exempt, breastfed their infants from birth and intended to continue for at least 2 years. Through constant comparison of data, five layers of influence emerged which described mothers' process of decision making: culture/society, community, health care system, family/friends and mother-infant dyad. Religious belief was an umbrella theme that was woven throughout all discussions and it was the strongest determining factor for choosing to breastfeed. However, cultural practices promoted pre-lacteal feeding and hence, jeopardising breastfeeding exclusivity. Although contradicted in Islamic tradition, most mothers practised fasting during breastfeeding because of misbeliefs about interpretations regarding these rules. Despite high rates of breastfeeding, there is a concern of lack of breastfeeding exclusivity among Middle-Eastern

settlers in Canada. To promote successful breastfeeding in Muslim migrant communities, interventions must occur at different levels of influence and should consider religious beliefs to ensure cultural acceptability. Practitioners may support exclusive breastfeeding through cultural competency, and respectfully acknowledging Islamic beliefs and cultural practices.

Kerr, Maticka-Tyndale, Bynum, Mihan, & The ACBY Team (2017)

Archives of Sexual Behavior

N=250

The disproportionate HIV burden shared by African, Caribbean, and Black (ACB) populations in Canada has not been explained by unique sexual behaviors in this population. This study investigates partner selection and sexual networking as potential contributors to HIV vulnerability. The study examines variations in the characteristics of sexual partners and sexual networking across groups based on differences in ethno-religious identity, gender, and length of Canadian residency among single, 16- to 27-year old, heterosexual-identified, ACB individuals living in Windsor, Ontario, Canada. Respondent-driven sampling maximized the representativeness of the sample of 250 (45 % male; 55 % female) youth with penile-vaginal intercourse experience who completed surveys. Logistic regression and analysis of variance compared groups with respect to number of lifetime partners, concurrency of sexual relationships, non-relational and age disparate partnering, and intra-ethnic sexual networking. For vulnerability associated with number of partners, concurrency and non-relational sex, women, newcomers to Canada, and African-Muslim participants were at lower vulnerability for HIV infection than their comparator groups. For vulnerability associated with sexual networking within a group with higher HIV prevalence, women and newcomers to Canada were at higher vulnerability to HIV infection than their comparator groups. There were insufficient data on age disparate partnering to support analysis. These results point to the importance of considering characteristics of partners and sexual networking both in further research and in developing policies and programs to curtail the spread of HIV and other sexually transmitted infections.

Lofters, Slater, and Vahabi (2018)

Journal of Immigrant and Minority Health

N=5311

Cancer screening is a core component of family medicine but screening inequalities are well documented in Canada for foreign-born persons. Although people of Muslim faith and culture are the fastest growing immigrant population in Canada, there is little information in the literature about their cancer screening practices. Determining screening gaps could inform practice-based quality improvement initiatives. We conducted a retrospective chart

review combining patient-level medical record data with self-reported religious affiliation to examine the relationship between religion and cancer screening in a large multi-site urban family practice. Religious affiliation was classified as Muslim, other affiliation, or atheist/no religious affiliation. 5311 patients were included in the study sample. Muslim patients were significantly less likely to prefer English for spoken communication than the other two groups, less likely to be Canadian-born, more likely to have a female family physician, and were over-represented in the lowest income quintile. Muslim women were most likely to be up-to-date on breast cancer screening (85.2 vs. 77.5 % for those with other religions vs. 69.5 % for those with no religious affiliation). There were no significant differences in cancer screening by physician sex. In this pilot study conducted within a primary care practice, we used self-reported data on religious affiliation to examine possible inequities in cancer screening and observed intriguing variations in screening by self-identified religious affiliation. Future efforts to collect and use similar patient-level data should incorporate non-official languages and intensively outreach to patients with less health system contact. Regardless, the family medicine context may be the ideal setting to collect and act on patient-level sociodemographic data such as religious affiliation.

Lofters, Vahabi, Fardad, and Raza (2017)

Cancer Management and Research

N=30

Background: With appropriate screening (ie, the Papanicolaou [Pap] test), cervical cancer is highly preventable, and high-income countries, including Canada, have observed significant decreases in cervical cancer mortality. However, certain subgroups, including immigrants from countries with large Muslim populations, experience disparities in cervical cancer screening. Little is known about the acceptability of human papillomavirus (HPV) self-sampling as a screening strategy among Muslim immigrant women in Canada. This study assessed cervical cancer screening practices, knowledge and attitudes, and acceptability of HPV self-sampling among Muslim immigrant women. Methods: A convenience sample of 30 women was recruited over a 3-month period (June–August 2015) in the Greater Toronto Area. All women were between 21 and 69 years old, foreign-born, and self-identified as Muslim, and had good knowledge of English. Data were collected through a self-completed questionnaire. Results: More than half of the participants falsely indicated that Pap tests may cause cervical infection, and 46.7% indicated that the test is an intrusion on privacy. The majority of women reported that they would be willing to try HPV self-sampling, and more than half would prefer this method to provider-administered sampling methods. Barriers to self-sampling included confidence in the ability to perform the test and perceived cost, and facilitators included convenience and privacy being preserved. Conclusion: The results demonstrate that HPV self-sampling may provide a favor-

able alternative model of care to the traditional provider-administered Pap testing. These findings add important information to the literature related to promoting cancer screening among women who are under or never screened for cervical cancer.

Lofters, Vahabi, Kim, Ellison, Graves, and Glazier (2017)

Cancer, Epidemiology, Biomarkers & Prevention

N=761,019

Background: Immigrant women are less likely to be screened for cervical cancer in Ontario. Religion may play a role for some women. In this population-based retrospective cohort study, we used country of birth as a proxy for religious affiliation and examined screening uptake among foreign-born women from Muslim-majority versus other countries, stratified by region of origin. Methods: We linked provincial databases and identified all women eligible for cervical cancer screening between April 1, 2012, and March 31, 2015. Women were classified into regions based on country of birth. Countries were classified as Muslim-majority or not. Results: Being born in a Muslim-majority country was significantly associated with lower likelihood of being up-to-date on Pap testing, after adjustment for region of origin, neighborhood income, and primary care-related factors [adjusted relative risk (ARR), 0.93; 95% (confidence interval) CI, 0.92–0.93]. Sub-Saharan African women from Muslim-majority countries had the highest prevalence of being overdue (59.6%), and the lowest ARR for screening when compared with women from non-Muslim-majority Sub-Saharan African countries (ARR, 0.77; 95% CI, 0.76–0.79). ARRs were lowest for women with no primary care versus those in a capitation-based model (ARR, 0.28; 95% CI, 0.27–0.29 overall). Conclusions: We have shown that being born in a Muslim-majority country is associated with a decreased likelihood of being up-to-date on cervical screening in Ontario and that access to primary care has a sizeable impact on screening uptake. Impact: Screening efforts need to take into account the background characteristics of population subgroups and to focus on increasing primary care access for all."

Maticka-Tyndale, Shirpak, and Chinichian (2007)

Canadian Journal of Public Health

N=20

Background: Sexual health is increasingly understood as an integral part of health. In Canada, education for sexual health is delivered predominantly in middle and secondary school. What of adults who immigrate to Canada from countries where sex education is not delivered to youth? This paper explores the needs and experiences of one such group of Canadian immigrants: those from Iran. Method: Ten married male and 10 mar-

ried female immigrants from Iran living in a mid-sized Canadian city were recruited using snowball sampling and participated in qualitative interviews. The sample varied in age, education level, duration of marriage, and stay in Canada. Results: Participants addressed three themes: experiences accessing information and health services, necessary content of information, and preferred ways of providing sexual health information and services. Key barriers to accessing and using sexual health services, experienced by all interviewees, regardless of the length of time they were in Canada, included language, cultural misunderstandings, embarrassment, long waits, and limited time that physicians spent with patients. Examples were provided of misunderstandings and inappropriate or even offensive questions or suggestions made by health practitioners who were unfamiliar with patients' cultural norms related to sexuality. Participants believed their needs and questions were different from their Canadian counterparts and wanted a confidential, linguistically and culturally friendly source of information such as a website in the Farsi language. Conclusions: More attention needs to be paid to developing public health and medical services related to sexual health that take account of the cultural diversities represented in the Canadian population.

Mihan, Kerr, & Maticka-Tyndale (2016)

AIDS Care

N=510

HIV-related stigma has been shown to undermine prevention, care, treatment, and the well-being of people living with HIV. A disproportionate burden of HIV infection, as well as elevated levels of HIV-related stigma, is evidenced in sub-Saharan African (SSA) and African-diasporic populations. This study explores factors that influence HIV-related stigma among 16- to 25-year-old youth residing in a Canadian city who identify as African, Caribbean, or Black. Stigma, as rooted in cultural norms and beliefs and related social institutions, combined with insights from research on stigma in SSA and African-diasporic populations, guided the development of a path analytic structural equation model predicting levels of HIV-related stigmatizing attitudes. The model was tested using survey responses of 510 youth to estimate the direct and indirect influences of ethno-religious identity, religious service attendance, time in Canada, HIV/AIDS knowledge, HIV-testing history, sexual health service contact, and gender on HIV-related stigma. Statistically significant negative associations were found between levels of stigma and knowledge and HIV-testing history. Ethno-religious identity and gender had both direct and indirect effects on stigma. African-Muslim participants had higher levels of stigma, lower knowledge, and were less likely to have been tested for HIV infection than other ethno-religious groups. Male participants had higher levels of stigma and lower knowledge than women. Time in Canada had only indirect effects on stigma, with participants in Canada for longer periods having higher knowledge and less likely to have been tested than more recent arrivals. While the strength of the effect

of knowledge on stigmatizing attitudes in this research is consistent with other research on stigma and evaluations of stigma-reduction programs, the path analytic results provide additional information about how knowledge and HIV-testing function as mediators of non-modifiable characteristics such as gender, ethnicity, religion, and time in a country.

Read, Carrier, Whitley, Gold, Tulandi, & Zelkowitz (2014)

The Journal of Alternative and Complementary Medicine

N=32

Objectives: To explore the use of complementary and alternative medicine (CAM) for infertility in a multicultural healthcare setting and to compare Western and non-Western infertility patients' reasons for using CAM and the meanings they attribute to CAM use. **Design:** Qualitative semi-structured interviews using thematic analysis. **Settings/location:** Two infertility clinics in Montreal, Quebec, Canada. **Participants:** An ethnoculturally varied sample of 32 heterosexual infertile couples. **Results:** CAM used included lifestyle changes (e.g., changing diet, exercise), alternative medicine (e.g., acupuncture, herbal medicines), and religious methods (e.g., prayers, religious talismans). Patients expressed three attitudes toward CAM: desperate hope, casual optimism, and amused skepticism. **Participants' CAM use** was consistent with cultural traditions of health and fertility: Westerners relied primarily on biomedicine and used CAM mainly for relaxation, whereas non-Westerners' CAM use was often influenced by culture-specific knowledge of health, illness and fertility. **Conclusions:** Understanding patients' CAM use may help clinicians provide culturally sensitive, patient-centered care.

Reitmanova and Gustafson (2008)

Maternal and Child Health Journal

N=6

Objectives The purpose of this qualitative study was to document and explore the maternity health care needs and the barriers to accessing maternity health services from the perspective of immigrant Muslim women living in St. John's, Canada. **Methods** A purposive approach was used in recruiting six individuals to participate in in-depth semi-structured interviews. Data were analyzed using a two-step process of content analysis. Three metathemes were identified and compared to previous research on maternity health and the care needs of immigrant women. **Results** Women experienced discrimination, insensitivity and lack of knowledge about their religious and cultural practices. Health information was limited or lacked the cultural and religious specificity to meet their needs during pregnancy, labor and delivery, and postpartum phases. There were also significant gaps between existing maternity health services and women's needs for emotional support,

and culturally and linguistically appropriate information. This gap was further complicated by the functional and cultural adjustments associated with immigration. Conclusions Maternity health care information and practices designed to meet the needs of mainstream Canadian-born women lacked the flexibility to meet the needs of immigrant Muslim women. Recommendations for change directed at decision makers include improving access to culturally and linguistically appropriate maternity and health related information, developing the diversity responsiveness of health care providers and the organizations where they work and establishing social support networks and partnerships with immigrant communities. Changes that address the needs of immigrant Muslim women have the potential to create more inclusive and responsive maternity health services for all Canadian women.

Vahabi and Lofters (2016)

BMC Public Health

N=30

Background: Canada has observed significant decreases in incidence and mortality of cervical cancer in recent decades, and this has been attributed to appropriate screening (i.e., the Pap test). However, certain subgroups including Muslim immigrants show higher rates of cervical cancer mortality despite their lower incidence. Low levels of screening have been attributed to such barriers as lack of a family physician, inconvenient clinic hours, having a male physician, and cultural barriers (e.g., modesty, language). HPV self-sampling helps to alleviate many of these barriers. However, little is known about the acceptability of this evidence-based strategy among Muslim women. This study explored Muslim immigrant women's views on cervical cancer screening and the acceptability of HPV self-sampling. Methods: An exploratory community-based mixed methods design was used. A convenience sample of 30 women was recruited over a 3-month period (June–August 2015) in the Greater Toronto Area. All were between 21 and 69 years old, foreign-born, self-identified as Muslim, and had good knowledge of English. Data were collected through focus groups. Results: This study provides critical insights about the importance of religious and cultural beliefs in shaping the daily and health care experiences of Muslim women and their cancer screening decisions. Our study showed the deterring impact of beliefs and health practices in home countries on Muslim immigrant women's utilization of screening services. Limited knowledge about cervical cancer and screening guidelines and need for provision of culturally appropriate sexual health information were emphasized. The results revealed that HPV self-sampling provides a favorable alternative model of care to the traditional provider-administered Pap testing for this population. Conclusion: To enhance Muslim immigrant women screening uptake, efforts should be made to increase 1) their knowledge of the Canadian health care system and preventive services at the time of entry to Canada, and 2) access to culturally sensitive education programs, female health professionals, and alternative modes of screening like HPV self-sampling. Health professionals need to take an active role in offering screening during health encounters,

be educated about sexual health communication with minority women, and be aware of the detrimental impact of preconceived assumptions about sexual activity of Muslim women.

Vahabi, Lofters, Kim, Wong, Ellison, Graves, and Glazier (2017)

Preventative Medicine

N=1,851,834

Breast cancer screening disparities continue to prevail with immigrant women being at the forefront of the under screened population. There is a paucity of knowledge about the role of religious affiliation or cultural orientation on immigrant women's cancer screening uptake. This study examined differences in uptake of breast cancer screening among women from Muslim and non-Muslim majority countries in Ontario, Canada. A cohort of 1,851,834 screening-eligible women living in Ontario during April 1, 2013 to March 31, 2015 was created using linked health and social administrative databases. The study found that being born in a Muslim majority country was associated with lower breast cancer screening uptake after adjusting for region of origin, neighbourhood income, and primary care-related factors. However, screening uptake in Muslim majority countries varied by world region with the greatest differences found in Sub-Saharan Africa and South Asia. Screening uptake was lower for women who had no primary care provider, were in a traditional fee-for service model of primary care, had a male physician, had an internationally trained physician, resided in a low income neighbourhood, and entered Canada under the family class of immigration. Religion may play a role in screening uptake, however, the variation in rates by regions of origin, immigration class, and access to primary care providers alludes to confluence of socio-demographic, cultural beliefs and practices, immigration trajectories and system level factors. Facilitating access for immigrant women to regular primary care providers, particularly female providers and enrollment in primary care models could enhance screening uptake.

Vahabi, Lofters, Wong, Ellison, Graves, Damba, and Glazier (2019)

Cancer Medicine

N= 3,692,291

Background Colorectal cancer (CRC) is the second and third highest cause of cancer deaths among Canadian men and women, respectively. Population-based screening through fecal occult blood testing (FOBT) has been proven to be effective in reducing CRC morbidity and mortality. Although participation in Ontario's organized CRC screening program has been increasing steadily since 2008, its uptake remains low among recent immigrant populations despite the known benefits of screening. To promote participation in CRC screening, it is imperative to understand both individual and system level barriers and enablers. Although a

number of immigrant and nonimmigrant factors have been associated with low participation, there is a dearth of knowledge related to the religious affiliation in CRC screening uptake. Our study is among the first to examine this issue in Ontario, one of the most ethnically diverse Canadian provinces and preferred settlement destinations for immigrants. Methods We conducted a population-based retrospective cohort study using linked health care administrative databases. Our cohort included Ontario residents, age 50-74 who were eligible for FOBT from 1 April 2013 to 31 March 2015. Results We found that immigrants from the Middle East and North Africa and Eastern Europe and Central Asia had the lowest rates of screening. Furthermore, being born in a Muslim-majority country was associated with lower FOBT screening even after controlling for other confounders including world region and income (ie, overall adjusted relative risk (ARR) of screening 0.92 [95% CI 0.90-0.93]). Moreover, being enrolled in a primary care model, having a female primary care provider and having an internationally trained physician were associated with increased screening among immigrants from Muslim-majority countries. Conclusions These findings can inform future efforts to improve screening uptake like: enhancing access to primary care providers and enrollment in primary care models, targeted FOBT education for male providers and providers not in a primary care model, development of culturally sensitive and appropriate educational materials, and use of interactive approaches for communication of cancer screening information.

Wiebe, Najafi, Soheil, and Kamani (2011)

Canadian Family Physician

N=53

Objective To improve understanding of the attitudes, beliefs, and experiences of Muslim patients presenting for abortion. Design Exploratory study in which participants completed questionnaires about their attitudes, beliefs, and experiences. Setting Two urban, free-standing abortion clinics. Participants Fifty-three self-identified Muslim patients presenting for abortion. Main outcome measures Women's background, beliefs, and attitudes toward their religion and toward abortion; levels of anxiety, depression, and guilt, scored on a scale of 0 to 10; and degree of pro-choice or antichoice attitude toward abortion, assessed by having respondents identify under which circumstances a woman should be able to have an abortion. Results The 53 women in this study were a diverse group, aged 17 to 47 years, born in 17 different countries, with a range of beliefs and attitudes toward abortion. As found in previous studies, women who were less pro-choice (identified fewer acceptable reasons to have an abortion) had higher anxiety and guilt scores than more pro-choice women did: 6.9 versus 4.9 ($P = .01$) and 6.9 versus 3.6 ($P = .004$), respectively. Women who said they strongly agreed that abortion was against Islamic principles also had higher anxiety and guilt scores: 9.3 versus 5.9 ($P = .03$) and 9.5 versus 5.3 ($P = .03$), respectively. Conclusion Canadian Muslim women presenting for abortion come from many countries and schools of Islam. The group of Muslim women that we surveyed was so diverse that no generalizations can be made about them. Their attitudes

toward abortion ranged from being completely prochoice to believing abortion is wrong unless it is done to save a woman's life. Many said they found their religion to be a source of comfort as well as a source of guilt, turning to prayer and meditation to cope with their feelings about the abortion. It is important that physicians caring for Muslim women understand that their patients come from a variety of backgrounds and can have widely differing beliefs. It might be helpful to be aware that patients who hold more anti-choice beliefs are likely to experience more anxiety and guilt related to their abortion than prochoice patients do.

5. Old Age

Dossa (2017)

Journal of Muslim Mental Health

N=25

How do Canadian Muslims engage with the exclusive and ambiguous terrain of palliative care? An ethnographic response to this question requires addressing a systemic paradox, namely, patient-centered and compassionate care is contingent upon diagnoses of terminal illness. Drawing upon long-standing research among Muslims in metropolis Vancouver, this study uses the construct of entangled emplacement to show the multiple ways in which research participants engage with this paradox. Allied closely to the unconventional ethnographic methods of mindful walking, memory work, and imagining home, the construct of entangled emplacement captures the research participants' expansive understanding of palliative care; this includes the process of displacement and reimagining a diasporic "home", tangled elements of which come into play at the time of death. In the light of neoliberal restructuring of the Canadian health system, I explore the implications of research findings for deep-level conversations across socio-cultural and medicalized boundaries, and tangled pathways of what has come to be known as "palliative care".

Lai and Suroid (2013)

National Association of Social Workers

N=220

This study examined the relationships between service barriers and health status of aging South Asian immigrants. Data were obtained through a structured telephone survey with a random sample of 220 South Asians 55 years of age and older. The effect of the different types of service barriers on the physical and mental health of participants was examined using

hierarchical multiple regression, while adjusting for participants' sociocultural demographic backgrounds. An average of 5.9 types of service barriers were reported. Among the four major types of barriers—cultural incompatibility, personal attitude, administrative problems, and circumstantial challenges—more barriers related to personal attitude predicted less favorable physical and mental health. In regard to health prevention, culturally appropriate strategies should be developed and implemented to help aging South Asians to overcome barriers related to personal attitude so that they can have better access to appropriate services.

Stroke, physical health

Salma, Hunter, Oglivie, and Keating (2018)

Canadian Journal of Nursing Research

N=16

Background Arab immigrants have increasing rates of stroke and uncontrolled stroke risk factors coupled with minimal resources for stroke prevention. Purpose This article describes the results of an interpretive descriptive study about Arab immigrant women's experiences of practicing stroke prevention. We use an intersectionality approach to discuss some of the factors that influenced women's ability to manage their health. Methods Sixteen middle-aged and older Arab Muslim immigrant women were recruited between 2015 and 2016 from two religious centers in an urban Canadian center. Women were between the ages of 45 and 75 years, were living in the community, and had a combination of stroke risk factors. Semi-structured interviews lasting 2–3 h were conducted in Arabic by the primary bilingual researcher. Data analysis was completed in Arabic, with final themes and exemplars translated to English with the support of a certified translator. Results Study themes include relating life stressors to physical health, pursuing knowledge in the dark, negotiating medication and treatment options, making an effort to eat healthy and be active, and identifying triple ingredients for empowerment. Conclusion Economic status, access to transportation, language fluency, life stressors, and personal coping strategies influenced Arab women's ability to manage personal health.

Salma, Keating, Oglivie, and Hunter (2017)

Journal of Interpersonal Violence

N=16

The increase in ethnically and linguistically diverse older adults in Canada necessitates attention to their experiences and needs for healthy ageing. Arab immigrant women often report challenges in maintaining health, but little is known about their ageing experiences.

This interpretive descriptive study uses a transnational life course framework to understand Arab Muslim immigrant women's experiences of engaging in health-promoting practices as they age in Canada. Women's stories highlight social dimensions of health such as social connectedness, social roles and social support that are constructed and maintained within different migration contexts across the life course. Barriers and facilitators to healthy ageing in this population centred around five themes: (i) the necessity of staying strong, (ii) caring for self while caring for others, (iii) double jeopardy of chronic illnesses and loneliness, (iv) inadequate support within large social networks and (v) navigating access to health-supporting resources. The findings point to transnational connections and post-migration social support as major influencers in creating facilitators and barriers to healthy ageing for Arab Muslim immigrant women.

Salma and Salami (2019)
Health Soc Care Community
N=67

The increase in global migration means more immigrants are ageing in host countries with unique experiences and needs. Muslim immigrants in Canada are from diverse ethno-cultural communities and experience unmet health and social needs in older age. A community-based participatory research project was conducted in Alberta, Canada, in 2017–2018 to understand the experiences and needs of healthy ageing in this population. A community advisory committee participated in all phases of the research project including initial framing of the research focus, recruitment, data collection and data analysis. In total, 67 older adults and stakeholders from South Asian, Arab and African Muslim communities participated in one of 23 individual interviews or seven focus group discussions over a 1-year period. Participants were asked about their experiences of growing old in Canada, unmet health and social needs, and community perspectives on healthy ageing. All data were audio-taped and transcribed verbatim. Interpreters were used for non-English speaking participants. Data were thematically analysed with a focus on social isolation and loneliness. Using an exclusion lens two major themes were identified: (a) intersections of exclusion: ageism, sexism, racism, and; (b) strategies for inclusion: local, national, transnational. Findings highlight both the vulnerability of Muslim immigrant older adults and their capacity for agency. The study findings point to the intersecting influences of exclusionary practices on social isolation and loneliness in immigrant older adults and the need to incorporate an exclusion lens in developing social policies and programs for healthy ageing.

Appendix Table 1. Detailed Characteristics of Included Studies (N=36) on Canadian Muslim Health

Author(s)	Publication Year	General Health	Mental Health	Physical Health	Sexual Health	Old Age
Aljaroudi, Horton and Manning	2019	Focal				
Baker	2007	Focal				
Dilmaghani	2018a	Focal				
Dyck and Dossa	2007	Focal				
Ali and Toner	2001		Focal			
Alvi and Zaidi	2019		Focal			
Dilmaghani	2018b		Focal	Focal		
Holtmann and Tramonte	2014		Focal			
Paterson and Hakim-Larson	2012		Focal			
Rousseau, Hassan, Moreau, & Thombs	2011		Focal			
Tuck, Robinson, Agic, Ialomiteanu, & Mann	2017		Focal			
Wu and Schimmele	2019		Focal			
Banerjee, Landry, Zawi, et al.	2017			Focal		
Honarmand, Leigh, Martin, et al.	2020			Focal		
Hussien	2008			Focal		
Pathy, Mills, Gazeley, Ridgley, and Kiran	2011			Focal		
Bottorff, Johnson, Bhagat, et al.	1998				Focal	
Causarano, Pole, Flicker, et al.	2010				Focal	

	Methodology	Sample Size	Population	Muslim Only	Geographic Area
	Qualitative, interviews	24	Arab Muslim immigrant mothers	Yes	Kitchener-Waterloo, ON
	Qualitative, interviews	26	Middle Eastern, Indian or Pakistani Muslims	Yes	New Brunswick
	Quantitative, CEDS	31,683	Canadian population	No	Canada
	Qualitative, interviews	30	South Asian Sikhs and Afghan Muslims	No	Vancouver, BC
	Quantitative	40	Canadian Muslims	Yes	Toronto, ON
	Qualitative, interviews	6	LGBTQ 2nd gen Canadian South Asian Muslims	Yes	Toronto, ON
	Quantitative, General Social Survey	23,093	Canadian population	No	Canada
	Quantitative, LSIC	3,897	Immigrant Canadian women	No	Canada
	Quantitative	98	Arab Canadian youth	No	Canada
	Quantitative	1,216	Ministry of Immigration and Cultural Communities	No	Montreal, QC
	Quantitative, CAMH Monitor Survey	16,596	Ontarian Canadians	No	Ontario
	Quantitative, General Social Survey	27,104	Canadian population	No	Canada
	Quantitative	19	South Asian Muslim women	Yes	Ontario
	Quantitative	1,001	Canadian population	No	Canada
	Quantitative, experimental	60	Arab Canadian Muslim women	Yes	London, ON
	Qualitative, interviews	35	Somali and Bangladeshi Muslim women; professionals	No	Toronto, ON
	Qualitative, interviews	50	South Asian Canadian women	No	Canada
	Quantitative, Toronto Teen Survey	1,216	Toronto teenagers	No	Toronto, ON

Community Consultation: Canadian Muslim Health Exceptionalism

Author(s)	Publication Year	General Health	Mental Health	Physical Health	Sexual Health	Old Age	
Jessri, Farmer, and Olson	2012				Focal		
Kerr, Maticka-Tyndale, Bynum, et al.	2017				Focal		
Lofters, Slater, and Vahabi	2018				Focal		
Lofters, Vahabi, Fardad, and Raza	2017				Focal		
Lofters, Vahabi, Kim, et al.	2017				Focal		
Maticka-Tyndale, Shirpak, and Chinichian	2007				Focal		
Mihan, Kerr, & Maticka-Tyndale	2016				Focal		
Read, Carrier, Whitley, et al.	2014				Focal		
Reitmanova and Gustafson	2008				Focal		
Vahabi and Lofters	2016				Focal		
Vahabi, Lofters, Kim, et al.	2017				Focal		
Vahabi, Lofters, Wong, et al.	2019				Focal		
Wiebe, Najafi, Soheil, and Kamani	2011				Focal		
Dossa	2017	Included	Included	Included		Focal	
Lai and Surood	2013	Included	Included	Included		Focal	
Salma, Hunter, Oglivie, and Keating	2018			Focal		Focal	
Salma, Keating, Oglivie, and Hunter	2017	Included	Included	Included		Focal	
Salma and Salami	2019	Included	Included	Included		Focal	

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	Methodology	Sample Size	Population	Muslim Only	Geographic Area
	Qualitative, interviews	22	Middle Eastern immigrant mothers	Yes	Edmonton, AB
	Quantitative	250	Single, 16- to 27-year old, heterosexual ACB	No	Windsor, Ontario
	Quantitative	5,311	All patients from multi-site urban family practice	No	Toronto, ON
	Quantitative	30	Canadian Muslim immigrant women	Yes	Toronto, ON
	Quantitative, population-based study	761,019	All cervical-screening eligible women	No	Ontario
	Qualitative, interviews	20	Iranian Canadians	Yes	Windsor, ON
	Quantitative	510	African, Caribbean, or Black youth	No	Windsor, ON
	Qualitative, interviews	32	Heterosexual infertile couples	No	Montreal, QC
	Qualitative, interviews	6	Immigrant Canadian Muslim women	Yes	St. John's, NL
	Mixed methods	30	Canadian Muslim immigrant women	Yes	Toronto, ON
	Quantitative, population-based study	1,851,834	Breast cancer screening-eligible women	No	Ontario
	Quantitative, population-based study	3,692,291	FOBT eligible Canadians	No	Ontario
	Quantitative	53	Canadian Muslim women seeking abortion	Yes	Canada
	Qualitative, ethnography	25	Iranians and Ismailis	Yes	Vancouver, BC
	Quantitative	220	Elderly South Asians	No	Calgary, AB
	Qualitative, interviews	16	Elderly immigrant Arab Muslim women	Yes	Urban center, AB
	Qualitative, interviews	16	Elderly immigrant Arab Muslim women	Yes	Urban center, AB
	Qualitative, interviews	67	South Asian, Arab, and African Muslim	Yes	Edmonton, AB



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