

July 17, 2020

Dr. Jordana Salma
Faculty of Nursing
4-211 Edmonton Clinic Health Academy
University of Alberta
Edmonton, Alberta T6G 1C9
sjordana@ualberta.ca

RE: Successful Seniors Health SCN Knowledge Synthesis Application
Project Title: “Does it Work and for Whom? A Realist Systematic Review of Physical Activity Interventions in Immigrant Older Adults”

Dear Dr. Salma,

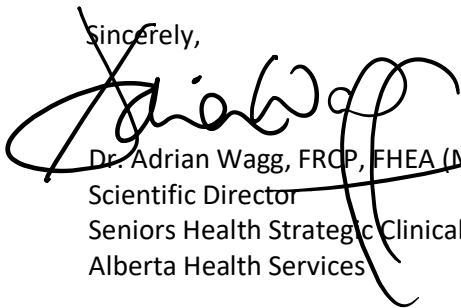
Thank you for your application to the Seniors Health Strategic Clinical Network™ (SCN) Knowledge Synthesis competition. We are delighted to inform you that your application was selected as one of two projects to be funded within this competition. Your award, totaling \$14,683, will be supported for a period of August 01, 2020 to July 31, 2021.

Please review the attached Terms and Conditions of your award, obtain the approval signatures, and return it by July 29, 2020. These Terms and Conditions represent your responsibility to the Seniors Health SCN, the award sponsor.

Upon obtaining departmental signature and faculty signatures, please create a New Project Request through the Researcher Homepage and attach your signed letter to obtain the Research Services signature. The SCN Research Services Office (RSO) contact is Pearl Douglas (pdouglas@ualberta.ca).

On behalf of the Seniors Health SCN, we would like to congratulate you and wish you success on this important project. If you have any questions, please contact Dr. Heather Hanson, Assistant Scientific Director, Seniors Health SCN, at heather.hanson@ahs.ca.

Sincerely,



Dr. Adrian Wagg, FRCP, FHEA (MD)
Scientific Director
Seniors Health Strategic Clinical Network™
Alberta Health Services



Dr. Heather Hanson, PhD
Assistant Scientific Director
Seniors Health Strategic Clinical Network™
Alberta Health Services

Seniors Health SCN Knowledge Synthesis Competition **Terms and Conditions Acknowledgement**

Principal Investigator: Dr. Jordana Salma

Project Title: Does it Work and for Whom? A Realist Systematic Review of Physical Activity Interventions in Immigrant Older Adults

Funding: \$14,683.00

Funding Period Start Date: August 01, 2020

Funding Period End date: July 31, 2020

Funding Source: University of Alberta

Block Grant Number: RES0039218

1. Definitions

“Researcher” means the individual, group, or organization(s) that is undertaking the Project.

“Institution” means the organization the Researcher has designated as the recipient of funding.

“Project” means the work to be undertaken by the Researcher for the Seniors Health SCN.

“Funding” means the grant set out in the Funding Letter.

“Funding Period” means the period for which Funding is awarded, as set out in the Funding Letter

2. Purpose of Funding

- i. The Researcher shall use the funding only for the delivery of the Project and in accordance with these terms and conditions. The funding shall not be used for any other purpose without the prior written agreement of the Seniors Health SCN.
- ii. The Researcher shall not make any significant change to the Project, including the reallocation of funds, without the prior written agreement of the Seniors Health SCN.

3. Payment of Funding

- i. Upon execution of the acknowledgement form, funding will be provided in one lump sum to the Researcher at the Institution indicated on the competition application.

- ii. The amount of funding shall not be increased in the event of any overspending by the Researcher in the delivery of the Project.
- iii. Any money incorrectly paid to the Institution, either as a result of an administrative error or otherwise, shall be promptly repaid to the Seniors Health SCN.

4. Use of Funding

- i. Funds may be used for:
 - a. Stipend support for trainees or salary support for research associates and technical/professional assistants. All salary requests must be broken down to identify the position title, role in the study and FTE dedicated to the study.
 - b. Supplies – consumable laboratory supplies, purchase of animals and general office supplies.
 - c. Equipment – must be integral to the proposed research.
 - d. Research operating expenses.
 - e. Expenses for travel that is essential for the conduct of the study (such as data collection or to attend study training); expenses for travel to conferences, meetings, symposia or presentations, however, will NOT be allowed.
 - f. Other expenses are allowed, but must be justified
- ii. Funds shall not be used for:
 - a. Previously incurred expenses: funding will not be provided for expenses incurred prior to implementation of the grant.
 - b. Principal Investigator salaries, including reimbursements or top-ups.
 - c. Legal or patent fees, membership fees, academic fees, secretarial support; travel to conferences, symposiums, meetings or presentations.
 - d. University overhead costs.
- iii. Should any part of the funding remain unspent at the end of the Project, the Institution shall ensure that any unspent monies are promptly returned to the Seniors Health SCN.

5. Reporting

- i. The Researcher shall keep separate, accurate, and up-to-date accounts and records of the receipt and expenditure of the funding monies received.
- ii. The Researcher shall keep all invoices, receipts, and accounts and any other relevant documents relating to the expenditure of the funding. Upon written notice of at least 15 business days, the Seniors Health SCN shall have the right to review, at reasonable request, the Researcher's accounts and records that relate to the expenditure of the funding and shall have the right to take copies of such accounts and records.
- iii. The Researcher shall closely monitor the delivery and success of the Project throughout the funding period to ensure that milestones are being met, deliverables are being provided, and these Terms and Conditions are being adhered to.
- iv. The Researcher shall meet with the Assistant Scientific Director, Seniors Health SCN to provide a short interim report on the progress, findings, and advancements in the study area.
- v. The Researcher shall provide the Seniors Health SCN with a final report on completion of the funding period, which shall confirm whether the Project has been successfully and

properly completed, with possible presentation to the Seniors Health SCN Core Committee to report on the Project and discuss opportunities for uptake of the findings.

- vi. All publications, including public messages, arising from this award grant must acknowledge the support of the Seniors Health SCN.

6. Changes or Termination

Changes affecting eligibility to hold this award or complete the research must be reported to the Seniors Health SCN without delay. These changes include, but are not limited to, changes to the investigative team and/or any changes to faculty or AHS appointment(s).

The Seniors Health SCN reserves the right to terminate any award if the conditions of the award are not met, or if there is evidence of unsatisfactory progress.

Declaration:

I have read my award offer letter and the Terms and Conditions of the Seniors Health Strategic Clinical Network™ Knowledge Synthesis award and agree to use the funds in the manner described in my project application and in accordance with these Terms and Conditions.

Acknowledgement by Researcher:

Jordana Salma
 Printed Name


 Original Signature

20 July 2020
 Date

Signature of Department Head: *n/a*

Printed Name

Original Signature

Date

Signature of Associate Dean:

Mark Haykowsky
 Printed Name


 Original Signature

July 22, 2020
 Date

Signature of Research Services Office:

Sarah Litvinchuk
 Contracts Specialist
 Research Services Office
 University of Alberta
 Printed Name


 Original Signature
 Sarah Litvinchuk
 Contracts Specialist
 Research Services Office
 University of Alberta

July 28, 2020
 Date

**Seniors Health Strategic Clinical Network™ (SCN)
Knowledge Synthesis Application Form**

Section 1: (maximum 2 pages)

Title of Proposed Review: “ Does it Work and for Whom? A Realist Systematic Review of Physical Activity Interventions in Immigrant Older Adults.”

Principal Investigator Contact Information

Name Jordana Salma	Email sjordana@ualberta.ca	Telephone 780-492-7555
Institution University of Alberta	Program (Faculty/Department/Division; Faculty) Faculty of Nursing	
Mailing Address: Faculty of Nursing 4-211 Edmonton Clinic Health Academy, University of Alberta	City Edmonton	Postal Code T6G 1C9

Team Members

Title	Name	Role	Tasks	Current Job Title & Employer
Dr.	Jordana Salma	PI	Leading review activities, mentoring students involved in review	Assistant Professor, UAlberta
Dr.	Hongmei Tong	Co-PI	Supporting mentorship of students helping with the review, serving as a second reviewer, and supporting peer-review manuscript writing	Assistant Professor, School of Social Work, MacEwan University
Dr.	Allyson Jones	Co-investigator	Providing systematic review methodological expertise and supporting interpretation of findings, writing community report and policy brief	Professor, Rehabilitation Medicine, UAlberta
Dr.	Salima Meherali	Co-investigator	Supporting data analysis with a focus on equity and diversity within sub-groups in study and analysis of qualitative data	Assistant Professor, Faculty of Nursing, UAlberta
Ms.	Megan Kennedy	Co-investigator	Leading literature searches via databases and supporting methodology write-up	Health Librarian, UAlberta

Dr.	Haidong Liang	Knowledge user	Providing feedback during the review on emerging findings and supporting knowledge mobilization efforts via disseminating findings to senior service organizations	Executive Director, West End Seniors centre
Mr.	Shahriyar Khan	Knowledge user	Providing feedback during the review on emerging findings and supporting knowledge mobilization via disseminating findings to immigrant-serving agencies and immigrant communities.	City of Edmonton, Multicultural liaison, Multicultural Relations Office

Experience of the Team

Dr. Jordana Salma (PA): Dr. Salma specializes in healthy aging in immigrant and racialized communities. In the past three years she has led/participated in seven research projects on immigrants’ social, mental and physical health. She is currently a co-investigator on four multi-disciplinary team grants related to immigrant older adults’ health and is the PI on one SSHRC funded grant related to social connectedness in older immigrants. She has also conducted a pilot study on the acceptability of a physical activity intervention and published on physical activity in older immigrants. Dr. Salma’s work focuses on theoretical development via qualitative, participatory, and mixed-methods and, hence, she has the necessary expertise to conduct the theoretical synthesis required of a realist review. Dr. Tong has been involved in various research projects funded by prominent national research agencies such as SSHRC and CIHR, related primarily to immigrants and aging populations in Canada. She will provide content expertise related to immigrant older adults, policy issues, and cross-cultural mechanisms influencing physical activity. Dr. Jones’ area of expertise is in mobility and aging with a track-record of publications in the area. She is a collaborator at the UAlberta Evidence Practice-Based Center. Her prior expertise with systematic reviews will help guide the systematic review activities and her content knowledge on physical activity/mobility interventions will support the theoretical development throughout the review. Dr. Meherali has expertise conducting systematic reviews with multiple publications as evidence of her work. Her areas of expertise relates to immigrants and health. She has conducted multiple systematic reviews and also has experience mentoring students involved in conducting systematic reviews. Ms. Kennedy is a Health librarian and has expertise in leading systematic review searches and supporting write-up of systematic review methodologies. Mr. Khan is the Multicultural Relation Liaison Officer for the City of Edmonton. Mr. Khan provides consultative services on the development of programs and practices that respond to the needs of multicultural communities and, in this capacity, he will be instrumental in informing the systematic review process via contextualizing emerging findings to local realities and needs. Dr. Haidong, as the Executive Director of the West End Seniors Centre, has long-standing expertise in the development and implementation of community-based seniors’ programs. His organization serves diverse seniors and his background in physical education and recreation will ensure valuable insights into the findings of the review and implications in Alberta.

Section 2: Knowledge Synthesis Proposal (maximum 5 pages)

Background

Canada currently has the second highest percentage (21.9%) of foreign-born nationals in the world (Statistics Canada, 2016). Newcomer immigrants tend to be healthier than native-born Canadians; however, this healthy immigrant effect diminishes with time (Kwak, 2018; Markides & Rote, 2019). Older immigrants are more likely to report social isolation and loneliness, have declining health and experience greater unmet health needs (Koehn, Neysmith, Kobayashi & Khamisa, 2013; Newbold & Filice, 2006). Acculturation can affect both dietary behaviors and physical activity of older immigrants in the host country (Mahmood, Bhatti, Leon, & Gotay, 2019; Salas, Raine, Vallianatos, & Spence, 2016). Although physical activity in the general population is inadequate (Colley et al., 2011), subpopulations such as immigrants are known to be at higher risks for inactivity and sedentary behavior (Dogra, Meisner, & Ardern, 2010; Fischbacher, Hunt, & Alexander, 2004; Tang, MacDougall, & Gasevic, 2015; Tong, Gould, & McKay, 2018; Victor, 2018). In Canada, studies consistently report sub-optimal levels of physical activity among immigrants (Kukaswadia, Pickett, & Janssen, 2014; Tremblay, Bryan, Pérez, Ardern, & Katzmarzyk, 2006). In recent years, increasing attention has been paid to maximizing functional ability to endorse *aging in place* and includes calls for further research on diverse populations such as immigrants (Beard et al., 2016). Engaging in physical activity delays the onset and progression of disability (Daskalopoulou, Stubbs, Kralj, Koukounari, Prince, & Prina, 2017; Tak, Kuiper, Chorus, & Hopman-Rock, 2013) and decreases mortality and risks of cardiovascular disease, dementias, and diabetes (Lear et al., 2017; Reiner, Niermann, Jekauc, & Woll, 2013). Lack of physical activity in immigrants is attributed to cultural and religious beliefs, lack of social support, acculturation stress, environmental and language barriers, perceptions of health and injury, and fear of going outside (Booth et al., 2013; Schuster, 2019; Daniel & Wilbur, 2011; O'Driscoll, Banting, Borkoles, Eime & Polman, 2014; Langerun et al., 2017). Using a socio-ecological framework, 44 correlates of physical activity were identified for immigrant populations (O'Driscoll et al., 2014), which points to the need to further explore, prioritize, and address those modifiable factors most significantly related to physical activity in older age. Additionally, a recent scoping review of the literature (in progress) indicated that a number of studies have been done to evaluate physical activity interventions in older immigrants but no synthesis of these studies exist. *We do not know which approaches, and related factors are most likely to improve physical activity in older immigrants, which factors are most relevant in Canada and, specifically, in the Albertan context.* To design and implement physical activity interventions that are feasible and translate into positive health outcomes, it is imperative that we first understand mechanisms and influencing factors related to physical activity in this population.

Research Question

This realist systematic review will allow us to synthesize the literature on how, why, and in what contexts physical activity interventions are effective in promoting wellbeing in older immigrants.

Primary research Question: What physical activity interventions and related dimensions are effective in improving the health of immigrant older adults?

Sub-Questions:

- What key features of interventions are most effective in increasing participation and adherence to physical activity in immigrant older adults?
- What underlying mechanisms and contexts influence participation in physical activity?
- What differences in interventions and outcomes are noted across sub-ethnocultural immigrant populations, genders, visible minority status, countries of origin, and age categories and why?
- How do identified mechanisms translate in the Alberta context for designing physical activity interventions?

Knowledge Synthesis Methods

Sedentary behavior and lack of physical activity in older age is a result of a complex set of factors at the individual, community, and systems levels which necessitates taking a multidimensional approach to understanding and addressing this wicked problem. Physical activity interventions are complex health interventions that are contingent for success on a set of personal, interpersonal, and environmental factors. A realist review explores how these factors shape the success of an intervention in a particular context through the development, testing and refining of a realist programme theory, consisting of context, mechanism, and outcome configurations (CMOCs) (Pawson, 2006a). A realist systematic review is a relatively new methodology and its strength is in allowing for in-depth analysis of multi-level mechanisms (individual, community, service, and system) *to better understand what works for whom, in what context, and how* (Wong et al., 2013). This will be a theory driven and interpretive review that does not focus solely on the effectiveness of the interventions but on the contributing mechanisms (underlying entities, processes, and structures which operate in particular contexts to generate outcomes of interest (as cited in Greenhalgh et al. 2010). This will entail synthesizing knowledge on intervention success, barriers to success, particular characteristics of contexts and populations and the ways these characteristics shape observed outcomes. This review will be registered in PROSPERO (International Prospective Register of Systematic Reviews) (Higgins et al., 2017).

A realist systematic review will require the following stages:

1. Clarifying the scope of existing theories
2. Searching for evidence
3. Appraising the evidence
4. Extracting the evidence
5. Synthesizing evidence
6. Making recommendations

Clarifying Scope of Existing Theories: In this first stage, review questions and search terms will be refined through analysis of experiential knowledge of the review team and stakeholders. The review team consists of experts in different disciplines (social work, nursing, rehabilitation medicine, and recreation therapy/physical education) which will allow for discussions on different conceptualizations and theoretical/methodological approaches to understanding physical activity in older adults. In addition to drawing from team expertise, we will conduct 8-10 stakeholder interviews to draw on their expertise on the relevance of potential theories and

mechanisms to understanding physical activity in older immigrants. Stakeholder consultations are essential (Eden et al., 2011) for high quality systematic reviews and information gathered from stakeholder interviews will further focus the search strategy, inform analysis, and contextualize findings on dominant barriers, resources and facilitators existing in the Alberta context. Interviews will be conducted with relevant stakeholders in Alberta who are part of immigrant serving agencies, seniors' organizations, ethnocultural community organizations, recreation centers, the Edmonton Seniors Coordinating Council, and municipal and provincial policy makers. Interviews will be one hour in length and will occur at locations convenient to participants (via telephone or zoom for the duration of COVID-19 pandemic restrictions). All interviews will be conducted by the PI who has expertise in qualitative methods. Interviews will be audio-recorded, transcribed verbatim, and analyzed using qualitative data management software (Nvivo 12) with a thematic analysis approach (Braun & Clarke, 2006). The conclusion of this phase will result in identifying preliminary explanatory theories of mechanisms, contextual factors, and related outcomes as these shape physical activity in older immigrants.

Searching, Appraising, and Extracting Evidence: A systematic literature search will be conducted by an experienced health sciences librarian (MK) to identify all relevant published studies. Searches will be performed in the following databases: MEDLINE via OVID;EMBASE via OVID;CINAHL via EBSCOhost; Scopus via Elsevier; Cochrane Library via Wiley; Sports Medicine & Education Index via ProQuest; SPORTDiscus via EBSCOhost. These databases will be searched using a combination of natural language vocabulary and controlled terms (subject headings) wherever they were available. Natural language terms will be derived from two main concepts: 1) Elderly (65+) immigrants and refugees across global contexts (low to medium and high-income countries) 2) Physical activity, including specific sports and types of exercises. We start out with a PICO question which we will refine as the review progresses : (P) Older immigrants (65+) and this will include all categories of migration, including refugees, economic and family-reunification categories; (I) both descriptive studies with no interventions and intervention studies focused on physical activity; and, (O) primary outcomes of interest will be self-reported physical activity, and clinical measures related to physical activity (strength, endurance, balance, coordination). Secondary outcomes will include subjective and objective measures of mental, emotional and social wellbeing. We expect the following types of studies to be included in the review: Studies that assess the impact of specific interventions or behaviors on PA and studies exploring motivators and barriers to PA. In keeping with a realist review methodology, studies will not be excluded based on design and studies will be selected based on their ability to address the research questions (Wong et al., 2013). All studies (quantitative, qualitative, mixed methods) that report on physical activity in older immigrants will be included in the review. Literature searches will take on an iterative cycle, with refinement as study progresses and further understanding of distinct concepts. Other search methods will include hand searches of the reference lists and forward citation searches, using Scopus, of papers to be synthesized in the review. To increase the sensitivity of our search, publication date or language restrictions will not be applied. To avoid publication bias, we will also search grey literature, the bibliographies of all relevant papers, and conference proceedings. We will also contact experts in the field to identify any missing papers/programs. First, two research assistants (RAs) will independently screen the titles and abstracts for inclusion criteria under the mentorship of the PI

and co-PI using a team-based iterative process to refine the search strategy. We will create an excel spread sheet identifying characteristics of study, quality of studies and major findings in relation to the review questions. Covidence is a web-based systematic review manager that provides a platform for importing and independent screening of article records. We will use Covidence to facilitate the screening process. The second stage will involve RAs independently assessing each study using a screening form to determine rigour and relevance by ranking studies as conceptually rich (high), moderate or low (Cooper et al., Pawson, 2006b). Evidence will not be excluded based on the appraisal, but it will allow us to speak to the strengths and weaknesses of emerging theoretical insights on physical activity in older immigrants. Any discrepancies in decision-making will be resolved by a third and fourth reviewer on the team (SM and AJ).

Synthesizing Evidence & Making Recommendations: The aim of data synthesis in a realist review is to combine and interpret data to develop the programme theory (a theory that explains the mechanism, influencing factors, and contextual variables that are relevant to designing physical activity interventions for older immigrants) using a realist logic analysis. We will analyze data based on types of interventions and outcomes in these populations. We will include a sub-analysis based on PROGRESS factors to determine sub-groups of immigrants most susceptible to inequities in physical activity interventions (differences in participation, adherence, influencing factors, observed outcomes). PROGRESS will allow us to apply an equity lens to our analysis by reviewing how interventions and related mechanisms vary across older immigrant populations based on **P**lace of residence, **R**ace, **O**ccupation, **G**ender, **R**eligion, **E**ducation, **S**ocio-economic status, and **S**ocial capital (O’Neill et al., 2014). Nvivo 12 qualitative data management software will be used to enter study information with a focus on the contexts and mechanisms of interventions and the outcomes that the relationship between the context and mechanism generate (Greenhalgh et al. 2010). We will identify underlying mechanisms that explain success or failure of interventions, contextual factors essential to intervention success in this population (including across PROGRESS characteristics), and the relationships identified in the literature between these mechanisms, contextual factors, and observed physical activity outcomes. Adjudication and triangulation with the research team and stakeholders will be used to refine theoretical insights which can be used across the studies to understand findings. The final product will be a programme theory to inform and guide physical activity intervention/program development in older immigrants.

Potential Impact

This review is related to the PSP question: “*What strategies best allow older adults to remain independent for as long as possible?*” Maintaining independence and safety at home (Canada Safety Council, 2016) becomes more significant with age as functional independence declines with physiological aging. Engaging in regular physical activity reduces functional limitations, disability, and loss of independence in older age (Dipietro et al., 2019; Paterson & Warburton, 2010). Decision makers increasingly recognize the impact of interventions on health equity. Some populations are less likely to participate and gain health benefits from interventions as much as others, which can exacerbate pre-existing inequities (Lorenc et al 2013). Also, policy makers report that the usefulness of systematic reviews can be limited when health equity is not taken into consideration (Welch et al., 2019). This realist review will take an in-depth and theoretically-sophisticated view of physical activity in older immigrants who experience multiple

vulnerabilities in older age. This review will support identifying mechanisms and contexts conducive to physical activity for older immigrants in Alberta, a population soon to constitute 30% -50% of the older adult population in the province (Statistics Canada, 2016). Community-based programs and health promotion approaches will benefit from a comprehensive synthesis of the evidence on physical activity interventions in this population with stakeholder input on potential influencers and mitigators within the local context. The PI (JS) has completed a pilot project on physical activity in older immigrants and aims to develop further interventions using co-design processes to engage local ethnocultural immigrant communities and relevant stakeholders (service providers, recreation centers, seniors service organizations) in promoting and engaging in physical activity in older age.

Dissemination Plan

Study findings will be disseminated via a peer-reviewed publication in the Journal of Aging and Physical Activity. We will also provide a policy brief and community report for dissemination to stakeholders. Mr. Khan and Dr. Haidong will support dissemination to relevant stakeholders due to their ongoing strong relationships with multicultural, immigrant, and senior service organizations. A webinar presentation will be advertised via the Edmonton Seniors Coordinating Council due to their connections with senior’s service organizations across Alberta and via the Seniors Health SCN. We will also disseminate information to our ongoing partners in the community via presentations to older adults and community members (Al-Rashid Mosque, SHAAMA Centre, ASSIST, Indo-Canadian Centre, Edmonton Immigrant Service Association).

Alignment with the Six Dimensions of Quality

ACCEPTABILITY

Health services are respectful and responsive to user needs, preferences and expectation.

ACCESSIBILITY

Health services are obtained in the most suitable setting in a reasonable time and distance.

APPROPRIATENESS

Health services are relevant to user needs and are based on accepted or evidence-based practice.

EFFECTIVENESS

Health services are based on scientific knowledge to achieve desired outcomes.

EFFICIENCY

Resources are optimally used in achieving desired outcomes.

SAFETY

Mitigate risks to avoid unintended or harmful results.

Section 3: Timeline and Budget (maximum 2 pages)

Timeline

Aug.2020-Dec.2020	Jan.2021-Mar.2021	Apr.2021-May2021	Jun2021-July2021
Stakeholder consultations and research team consultations.	Review of databases, selection and screening of articles	In-depth reading of articles, data extraction and thematic analysis.	Write up of final manuscript. <u>Deliverable:</u> Publishable

<u>Deliverable:</u> Individual interviews completed with 8-10 key stakeholders. A beginning conceptualization of key mechanisms and contextual factors.	<u>Deliverable:</u> Prisma Diagram with selected articles for final inclusion in review.	<u>Deliverable:</u> Data tables with description of studies and key findings.	manuscript for peer review submission, policy brief, and webinar presentation on findings.
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Budget

Item	Justification	Cost
Graduate Research Assistant	Two RAs (masters or PhD students in the faculty of nursing and social work) will be needed for this study. The RAs will assist in scanning titles, selecting abstracts, selecting full-text articles, data abstraction, quality assessment, thematic analysis and final write-up of findings. Each RA will work 7 hours per week over 8 months at \$26.63 per hour (Step 7, Grade 5), 10.5% is added to this salary for benefits. $\$26.63 \times 10.5\% \times 14 \text{ hrs (7 hours/RA)} \times 32 \text{ weeks}$.	\$13,183
Transcription	Transcription fees are \$150/one-hour audio interview. Interviews will be transcribed by a trained transcriptionist to allow for thematic analysis by the trainee and incorporation of findings into final manuscript and policy brief: 10 interviews x \$150=	\$1,500
Total:		14,683
In-Kind	Nvivo 12 Qualitative Analysis Software=\$1,000 Costs covered by PI's Faculty of Nursing Establishment Grant	\$1,000

Section 4: Application Appendices (maximum 6 pages)

References

Principal Investigator CV

References

- Beard, J. R., Officer, A., de Carvalho, I. A., Sadana, R., Pot, A. M., Michel, J., . . . Chatterji, S. (2016). The world report on ageing and health: A policy framework for healthy ageing. *Lancet, 387 North American Edition* (10033), 2145-2154.
- Booth, G. L., Creatore, M. I., Moineddin, R., Gozdyra, P., Weyman, J. T., Matheson, F. I., & Glazier, R. H. (2013). Unwalkable neighborhoods, poverty, and the risk of diabetes among recent immigrants to Canada compared with long-term residents. *Diabetes Care, 36*(2), 302-308.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.
- Canada Safety Council. (2016). Canada's voice and resource for safety. Retrieved from <https://canadasafetycouncil.org/senior-safety>.
- Colley, R. C., Garriguet, D., Janssen, I., Craig, C. L., Clarke, J., Tremblay, M. S. (2011). Physical activity of Canadian adults: Accelerometer results from the 2007 to 2009, Canadian Health Measures Survey. *Health Reports, 22*(1), 7-14.
- Cooper, C., Lhussier, M., Shucksmith, J., et al. (2017). Protocol for a realist review of complex interventions to prevent adolescents from engaging in multiple risk behaviour. *BMJ Open, 7*, e015477.
- Daniel, M., & Wilbur, J. (2011). Physical activity among South Asian Indian immigrants: An integrative review. *Public Health Nursing, 28*(5), 389-401.
- Daskalopoulou, C., Stubbs, B., Kralj, C., Koukounari, A., Prince, M., & Prina, A. M. (2017). Physical activity and healthy ageing: A systematic review and meta-analysis of longitudinal cohort studies. *Ageing Research Reviews, 38*, 6-17.
- Dipietro, L., Campbell, W. W., Buchner, D. M., et al. (2019). Physical Activity, Injurious Falls, and Physical Function in Aging: An Umbrella Review. *Medicine & Science in Sports & Exercise, 51*(6), 1303-1313.
- Dogra, S., Meisner, B. A., & Arden, C. I. (2010). Variation in mode of physical activity by ethnicity and time since immigration: A cross-sectional analysis. *International Journal of Behavioral Nutrition & Physical Activity, 7*(1), 75. doi:10.1186/1479-5868-7-75
- Fischbacher, C. M., Hunt, S., & Alexander, L. (2004). How physically active are South Asians in the United Kingdom? A literature review. *Journal of Public Health, 26*(3), 250-258.
- Greenhalgh, T., Wong, G., Westhorp, R., Pawson, R. (2011). Protocol—Realist and Meta-narrative Evidence Synthesis: Evolving Standards (RAMESES). *BMC Research Methodology, 16*(1), 115. Available at <http://www.ncbi.nlm.nih.gov/pubmed/21843376>
- Higgins, J. P. T., Churchill, R., Chandler, J., Cumpston, M. S. (editors). (2017). Cochrane Handbook for Systematic Reviews of Interventions version 5.2.0, Cochrane.
- Institute of Medicine (US) Committee on Standards for Systematic Reviews of Comparative Effectiveness Research; Eden, J., Levit, L., Berg, A., et al., editors. Finding What Works in Health Care: Standards for Systematic Reviews. Washington (DC): National Academies

- Press (US); 2011. 2, Standards for Initiating a Systematic Review. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK209515/>
- Koehn, S., Neysmith, S., Kobayashi, K., & Khamisa, H. (2013). Revealing the shape of knowledge using an intersectionality lens: Results of a scoping review on the health and health care of ethnocultural minority older adults. *Ageing & Society*, 33(3), 437-464.
- Kukaswadia, A., Pickett, W., & Janssen, I. (2014). Time since immigration and ethnicity as predictors of physical activity among Canadian youth: a cross-sectional study. *PLoS One*, 9(2).
- Kwak, K. (2018). Age and gender variations in health immigrant effect: A population study of immigrant well-being in Canada. *Journal of International Migration & Integration* 19(2), 413–437.
- Langoien, L. J., Terragni, L., Rugseth, G., Nicolaou, M., Holdsworth, M., Stronks, K., Lien, N., & Roos, G. (2017). Systematic mapping review of the factors influencing physical activity and sedentary behaviour in ethnic minority groups in Europe: A DEDIPAC study. *International Journal of Behavioral Nutrition & Physical Activity*, 14(1),1-24.
- Lasserson T. J., Thomas, J., Higgins, J. P. T. Chapter 1: Starting a review. In: Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (editors). *Cochrane Handbook for Systematic Reviews of Interventions* version 6.0 (updated July 2019). Cochrane, 2019. Available from www.training.cochrane.org/handbook.
- Lear, S. A., Hu, W., Rangarajan, S., Gasevic, D., Leong, D., Iqbal, R., Yusuf, S.(2017). The effect of physical activity on mortality and cardiovascular disease in 130 000 people from 17 high-income, middle-income, and low-income countries: the PURE study. *Lancet*, 390(10113), 2643–2654.
- Mahmood, B., Bhatti, J. A., Leon, A., & Gotay, C. (2019). Leisure time physical activity levels in immigrants by ethnicity and time since immigration to Canada: Findings from the 2011-2012 Canadian Community Health Survey. *Journal of Immigrant & Minority Health*, 21(4), 801-810.
- Markides, K. S., & Rote, S. (2019). The healthy immigrant effect and aging in the United States and other western countries. *Gerontologist*, 59(2), 205-214.
- O'Driscoll, T., Banting, L., Borkoles, E., Eime, R., & Polman, R. (2014). A systematic literature review of sport and physical activity participation in culturally and linguistically diverse (CALD) migrant populations. *Journal of Immigrant & Minority Health*, 16(3), 515-530.
- O'Neill, J., Tabish, H., Welch, V., Petticrew, M., Pottie, K., Clarke, M., Evans, T., Pardo Pardo, J., Waters, E., White, H., Tugwell, P. (2014). Applying an equity lens to interventions: using PROGRESS ensures consideration of socially stratifying factors to illuminate inequities in health. *Journal of Clinical Epidemiology*, 67 (1), 6-64.
- Paterson, D. H., & Warburton, D. E. (2010). Physical activity and functional limitations in older adults: a systematic review related to Canada's Physical Activity Guidelines. *International Journal of Behavior, Nutrition and Physical Activity*, 7.
- Pawson, R. (2006a). *Evidence-based policy: A realist perspective*. London: Sage.

- Pawson, R. (2006b). Digging for nuggets: how 'bad' research can yield 'good' evidence. *International Journal of Sociological Research Methodology*, 9,127-142.
- Reiner, M., Niermann, C., Jekauc, D., & Woll, A. (2013). Long-term health benefits of physical activity - a systematic review of longitudinal studies. *BMC Public Health*, 13(1), 813-813.
- Salas, X. R., Raine, K., Vallianatos, H., & Spence, J. C. (2016). Socio-cultural determinants of physical activity among Latin American immigrant women in Alberta, Canada. *Journal of International Migration and Integration*, 17(4), 1231-1250.
- Statistics Canada (2016). Immigration and Ethnocultural Diversity: Key Results from the 2016 Census. Retrieved from <https://www150.statcan.gc.ca/n1/en/daily-quotidien/171025/dq171025b-eng.pdf?st=ixKYOblv>
- Tak, E., Kuiper, R., Chorus, A., Hopman-Rock, M. (2013). Prevention of onset and progression of basic ADL disability by physical activity in community dwelling older adults: A meta-analysis. *Ageing Research Reviews*, 12(1), 329-338.
- Tang, N., MacDougall, C., & Gasevic, D. (2015). Physical activity change of English, French and Chinese speaking immigrants in Ottawa and Gatineau, Canada. *Public Health Research*, 5(2), 39-49.
- Tang, N., MacDougall, C., & Gasevic, D. (2015). Physical activity change of English, French and Chinese speaking immigrants in Ottawa and Gatineau, Canada. *Public Health Research*, 5(2), 39-49.
- Tong, C. E., Gould, J. S., & McKay, H. A. (2018). Physical activity among foreign-born older adults in Canada: A mixed-method study conducted in five languages. *Journal of Aging & Physical Activity*, 26(3), 396-406.
- Tremblay, M. S., Bryan, S. N., Pérez, C. E., Ardern, C. I., & Katzmarzyk, P. T. (2006). Physical activity and immigrant status. *Canadian Journal of Public Health*, 97(4), 277-282.
- Tremblay, M. S., Warburton, D. E. R., Murumets, K., Duggan, M., Janssen, I., Paterson, D. H., Zehr, L.(2011). New Canadian physical activity guidelines. *Applied Physiology, Nutrition, & Metabolism*, 36(1), 36-46.
- Victor, C. R. (2018). Physical Activity amongst Ethnic Minority Elders: The Experience of Great Britain. In *The Palgrave Handbook of Ageing and Physical Activity Promotion* (pp. 589-605). Basingstoke, England: Springer
- Welch VA, Petkovic J, Jull J, Hartling L, Klassen T, Kristjansson E, Pardo Pardo J, Petticrew M, Stott DJ, Thomson D, Ueffing E, Williams K, Young C, Tugwell P. Chapter 16: Equity and specific populations. In: Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (editors). *Cochrane Handbook for Systematic Reviews of Interventions* version 6.0 (updated July 2019). Cochrane, 2019. Available from www.training.cochrane.org/handbook.
- Wong, G., Greenhalgh, T., Westhorp, G. et al. (2013). RAMESES publication standards: realist syntheses. *BMC Medicine*, 11.

JORDANA SALMA

RN, PhD, Assistant Professor, Faculty of Nursing, University of Alberta

EDUCATION

Post-Doctoral Fellowship (2017-2018), University of Alberta, Edmonton AB

PhD in Nursing (2009-2017), University of Alberta, Edmonton AB

Masters in Nursing (2006-2009), University of Alberta, Edmonton AB

BScN with Honors (2001-2005), Lebanese University, Beirut Lebanon

WORK EXPERIENCE

Assistant Professor (2018-ongoing), Faculty of Nursing, University of Alberta, Edmonton AB

Clinical Nurse Educator (2013-2017), Faculty of Nursing, MacEwan University, Edmonton AB

Research Assistant (2007-2008), Faculty of Nursing, University of Alberta, Edmonton AB

Registered Nurse (2007-2016), University of Alberta Hospital, Edmonton AB

RESEARCH GRANTS

Salma, J. (PI), Kobayashi, K. (2018). Muslim Women in Canada: Understanding and Mobilizing for Social Connectedness in Older Age. SSHRC, Insight Grant, \$99,835.

Guruge, S. (PI), Sethi, B., Walsh, C., Cloutier, D., Tong, H., Ferrer, I., Ploeg, J., Shields, J., **Salma, J. (Co-Investigator)**, et al. (2019-2020). Addressing Social Isolation Among Older Immigrants in Canada: Developing a Multi-Level, Multi-Component Intervention to Promote Connectedness. SSHRC Partnership Grant-Stage 2, \$2.5 million.

Yamamoto, S., Allyson, J., Osornio Vargas, A., Sapkota, B., Hodgins, S., & **Salma, J. (Co-Investigator)**. (2020). Mind the Gap: Assessing Climate Change Vulnerability Across Populations. SSHRC-Knowledge Synthesis Grant. \$50,000

Yamamoto, S (PI), **Salma, J. (Co-PI)**, Bulut, O., & Jones, A. (2019-2020). Building Community Climate Change Knowledge and Resilience in Older Adults and Immigrants. North American Partnership for Environmental Community Action, \$155,000

Tong, H. (PI), **Salma, J. (Co-Investigator)**, Turcotte, K., & Dhungel, R. (2019). Using intergenerational digital storytelling to understand social isolation, loneliness, and resilience among Chinese immigrants. SSHRC Institutional Grant, MacEwan University, \$16,300.

Yamamoto, S (PI), **Salma, J. (Co-PI)**, Bulut, O., & Jones, A. (2019-2020). Climate Change, Older Adults and Immigrants: Exploring Community Vulnerability and Resilience. Cities IPCC Legacy Research Grant Program, \$50,000

Salma, J. (PI), Jones, A. (PI), Yamamoto, S. (2019). Outdoor Walking Program for Older Immigrants: A Pilot Project. Faculty of Nursing Establishment Grant, UAlberta, \$16,500

Guruge, S. (PI), Sethi, B., Walsh, C., Cloutier, D., Tong, H., Ferrer, I., Ploeg, J., Shields, J., **Salma, J. (Co-Investigator)**, et al. (2020-2027). Addressing Social Isolation Among Older Immigrants in

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Canada: Developing a Multi-Level, Multi-Component Intervention to Promote Connectedness. SSHRC Partnership Grant-Stage 2, \$2.5 million.

Salma, J. (2018-2019). Mapping the Transnational Landscape of Immigrants' Wellbeing in a Digital Age. Killam Research Fund, UAlberta, \$6,915

Salami B (PI), **Salma, J. (Co-Investigator)**, Alaazi, D., Villianatos, H., Bonnioca, J., Okeke Ihejirika, P., Scott, S., Yohani, S. (2017-2018). A Participatory Action Research Project to Promote the Mental Health of Africa Immigrant Children in Alberta. WCHRI, \$50,000

Salami B. (PI), **Salma, J. (Co-Investigator)**, Jackson, M., Harvey-Blankenship, M., Okeke-Ihejirika, P. (2017-2018). A Participatory Action Research Project to Promote the Mental Health of African, Black, and Caribbean Youths in Alberta. Policy Wise, \$40,000

Salami, B. (PI) & **Salma, J. (Co-PI)**. (2017-2018). Identifying the Needs for Healthy Aging in Muslim Immigrant Communities. Faculty of Nursing Endowment Fund, UAlberta, \$5,000

PUBLICATIONS & PRESENTATIONS

Salma, J., Jones, A., Ali, S., Salami, B., & Yamamoto, S., (2020). "A Qualitative Exploration of Immigrant Muslim Older Adults' Experiences and Perceptions of Physical Activity". *Journal of Aging and Physical Activity*. Advance online publication. 10.1123/japa.2019-0297.

Salma, J. & Salami, B. (2020). "We are like any other people but we don't cry much because nobody listens.": The need to strengthen aging policies and service provision for minorities in Canada. *The Gerontologist*, 60(2), 279–290. doi: 10.1093/geront/gnz184

Salami, B., Mason, A., **Salma, J.**, Yohani, S., Amin, M., Okeke-Ihijerika, P., & Ladha, T. (2020). Access to Healthcare for Immigrant Children in Canada. *Environmental Research and Public Health*, 17, 3320. doi:10.3390/ijerph17093320

Salma, J. & Salami, B. (2019). "Growing old is not for the weak of heart": Social isolation and loneliness in Muslim immigrant older adults in Canada. *Health & Social Care in the Community*, 28(2), 615-623. doi:10.1111/hsc.12894

Salami, B., **Salma, J.**, Hegadoren, K., Meherali, S., Kolawole, T., & Diaz, E. (2019). Barriers and facilitators to develop a sense of community belonging among immigrants: Perspectives of immigrant service providers. *Public Health*, 167,38-33. doi: 10.1016/j.puhe.2018.10.017

Salami, B., **Salma, J.**, Hegadoren, K. (2019). Access and utilization of mental health services for immigrants and refugees: Perspectives of immigrant service providers. *International Journal of Mental Health Nursing*, 28(1), 152-161. doi: 10.1111/inm.12512

Salma, J., Hunter, K. F., Ogilvie, L., & Keating, N. (2018). An intersectional exploration: Experiences of stroke prevention in middle-aged and older Arab Muslim immigrant women in Canada. *Canadian Journal of Nursing Research*, 50(3), 110-119. doi:10.1177/0844562118760076

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Salma, J., Keating, N., Ogilvie, L., & Hunter, K. F. (2018). Social dimensions of health across the life course: Experiences of engaging in health-promoting practices in middle-aged and older Arab immigrant women. *Nursing Inquiry*, 25(2), 12226. doi: 10.1111/nin.12226

Salma, J., Ogilvie, L., Keating, N., & Hunter, K. F. (2017). A bicultural researcher's reflections on ethical research practices with Muslim immigrant women: Merging boundaries and challenging binaries. *Advances in Nursing Science*, 40(2),109-121. doi:10.1097/ANS.0000000000000170

Salma, J., Hegadoren, K, & Ogilvie, L. (2012). Career advancement and educational opportunities: Experiences and perceptions of internationally educated nurses. *Canadian Journal of Nursing Leadership*, 25(3), 56-67.

Sample Presentations

Salma, J. (2019). Improving Seniors Services to Meet the Needs of Canada's Diverse Immigrant and Ethnocultural Communities. Oral Presentation, Vision 2030 For Seniors Services Symposium, Edmonton, AB.

Salma, J. (2020). The Story of Migration in the Health Disciplines. Oral Presentation, Migration Research Group, UAlberta, Edmonton, AB.

Salma, J. (2018). The Muslim Seniors Study: A Community-Based Participatory Research Project. Poster Presentation, Canadian Association of Gerontology Conference, Vancouver, BC.

Salma, J. (2018). Transnational Influences on Chronic Disease Management in Arab Immigrant Women. Workshop Session, National Metropolis Conference, Calgary, AB.

STUDENT SUPERVISION

Doctoral Supervision: 2 students; Masters students: 4; Honors students: 2

TEACHING

NURS 546 (Philosophy of Teaching); NURS 502 (Nature of Nursing Knowledge); NURS 311 (Nursing Research); NURS 221(Introduction to Acute Care Nursing Practice).

SERVICE

Research Review Committee, Faculty of Nursing (2019-ongoing)

Immigration Working Group, Interdisciplinary, UAlberta (2019-ongoing)

Migration & Health Research Group, Faculty of Nursing, UAlberta (2019-ongoing)

Board member, Seniors Committee, Canadian Islamic Center, Edmonton, AB (2018-ongoing)