



Chronic disease, Risk factors, and Quality of Life of Older Adults residing in Ontario Subsidised Housing

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Introduction

- Background
 - High prevalence of chronic disease among older adults
 - High prevalence of lifestyle-related illness among low SES
 - Older adults living in subsidized senior's buildings have lower SES
 - Does this population have a low health-related quality of life?

Community Data: Cost of Healthcare

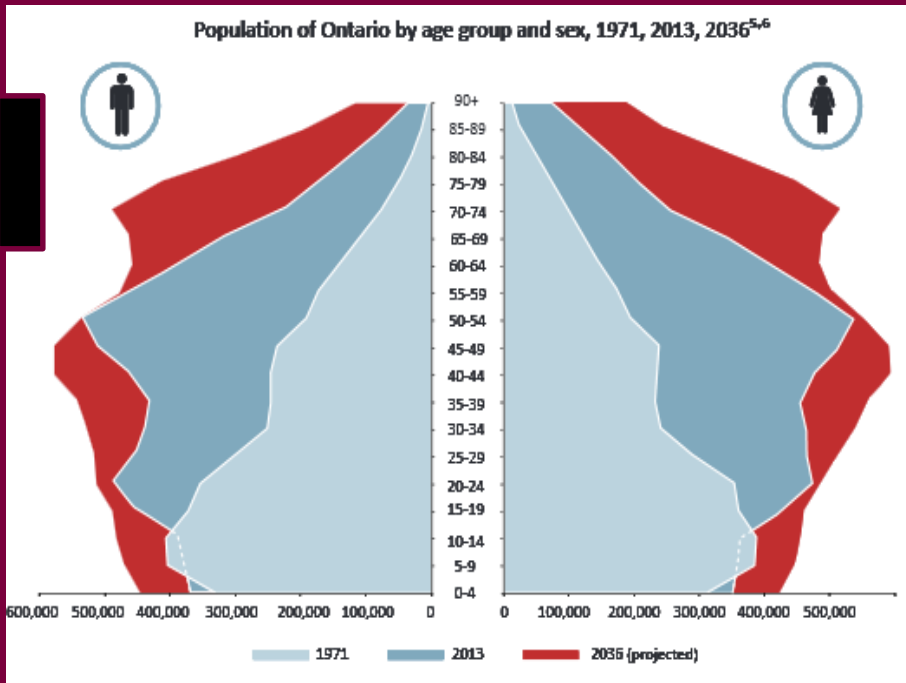
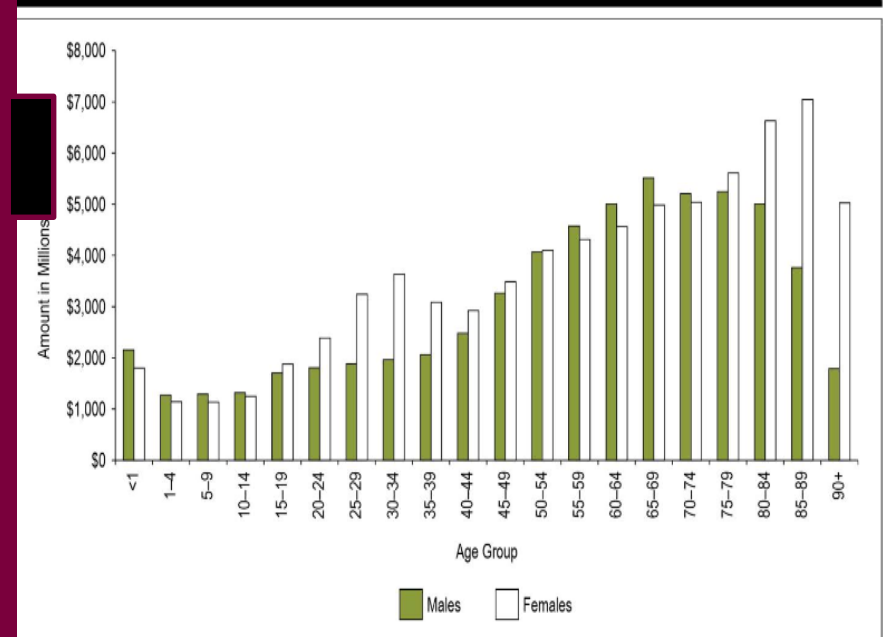


Figure 33: Total Provincial/Territorial Government Health Expenditure, by Age and Sex, Canada, 2012



Health expenditures raise as people age & the older population with in Canada is expected to grow

Graph 1: Public Health Ontario. (2016) Ontario's Population: Determinants of Health. Retrieved from <https://www.publichealthontario.ca/en/DataAndAnalytics/OntarioHealthProfile/Pages/default.aspx>

Graph 2: Canadian Institute for Health Information. (2014) National Health Expenditure Trends, 1975 to 2014. Retrieved from: https://www.cihi.ca/en/nhex_2014_report_en.pdf

Introduction

- Objective:
 - Understand health-related quality of life (HRQoL) in this population as measured by
 - Self Reported Health status
 - EQ5D: Pain/discomfort, anxiety/depression, ability to perform daily tasks, self-care, mobility
 - and the factors affecting both these measures:
 - Demographic
 - Health conditions
 - Chronic disease knowledge
 - Lifestyle risk factors and Chronic Diseases
 - Confidence to make changes
 - Health literacy

Methods

- Health Awareness and Behaviour Tool (HABiT)
 - CCHS
 - EQ5D
 - CANRISK
 - CHEP (Cardiovascular risks)
 - Other Diabetes Risk questions (CHAD)
 - NVS-UK (Health literacy)
- Residents 55 years and older
- 12 subsidized apartment buildings in 3 communities
- Trained research staff/paramedics

Methods

- Analysis:
 - Descriptive analysis
 - Regression
 - Outcomes: HRQoL
 - Predictors:
 - Demographic
 - Health conditions
 - Lifestyle risk factors
 - Chronic disease knowledge
 - Confidence to make changes
 - Health literacy

Results

- 437 residents, mean age = 72.2
- Demographics:
 - 73% female
 - 71% high school or less
 - 91% lived alone (widowed, single, divorced)
- Self-reported Health:
 - 42% poor-fair health status
 - 27% diabetes
 - 55% hypertension
 - 39% high cholesterol
 - 33% overweight
 - 33% obese

Results cont.

- Knowledge of chronic disease risk factors
 - Very good (over 80%), less for diabetes
- Health literacy
 - Nutrition label comprehension inadequate in 80%
- HRQoL:
 - 70% pain/discomfort
 - 61% had mobility problems
 - 44% anxiety/depression
 - 42% problems doing usual activities
 - 18% problems with self-care

Results cont.

- What factors are related to HRQoL? (n=437)

| | SRHS | HRQoL |
|----------------------|-----------|----------|
| Age | .276 | -1.195 |
| Gender | -1.374 | -1.092 |
| Education | .846 | .849 |
| Smoking | 3.058** | ---- |
| Alcohol Intake | -2.483* | ---- |
| High Cholesterol | -2.036* | ---- |
| Heart Problems | -5.560*** | -3.167** |
| Stroke | ---- | -2.034* |
| Handle Day-to-day | 6.315*** | 3.699*** |
| Confidence to Change | ---- | 2.222* |
| Sitting- Watching TV | ---- | 1.927 |

* $p < .05$ ** $p < .01$ *** $p < .001$

Related to SRHS and QoL

- What factors are related to SRHS/HRQoL? (n=437)

| | SRHS | HRQoL |
|----------------------|------------|------------|
| Age | .276 | -1.195 |
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| Confidence to Change | ---- | 2.222* ✕ |
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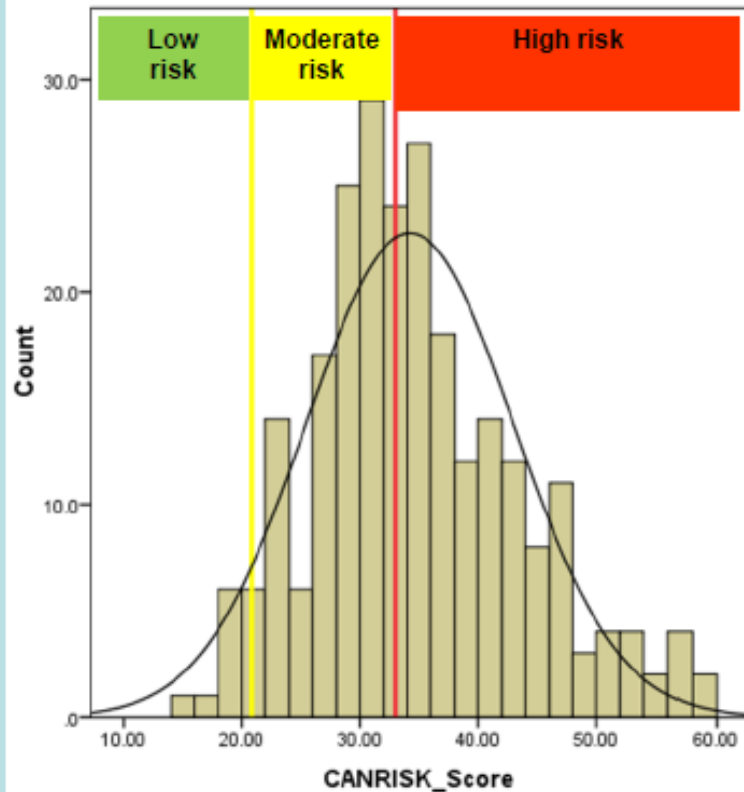
✕ MODIFIABLE ✕

* p < .05 ** p < .01 *** p < .001

| | Pain/ Discomfort | Mobility | Self-care | Usual Activities | Anxiety/ Depression |
|-------------------------|---------------------|----------|-----------|---------------------|------------------------|
| Age | 1.496 | -2.436* | -1.925 | -.365 | 3.777*** |
| Gender | .636 | .694 | -.785 | .838 | 1.591 |
| Education | -1.775 | 1.375 | -.193 | -1.463 | -.256 |
| Alcohol Intake | ---- | -2.384* | ---- | ---- | ---- |
| Diet | ---- | 2.042* | ---- | ---- | ---- |
| Heart Problems | ---- | -2.580* | -3.231** | ---- | ---- |
| Stroke | ---- | -2.625** | -3.162** | ---- | ---- |
| Diabetes | ---- | -2.261* | ---- | ---- | ---- |
| Handle Day-to-day | 2.921** | 2.131* | 2.661** | 4.837*** | 3.678*** |
| Concern of risk | ---- | ---- | ---- | ---- | -1.881 |
| Confidence to change | 2.556* | ---- | ---- | ---- | 3.326** |
| Intent to change | ---- | ---- | .310 | .638 | ---- |
| Sitting-TV | 1.476 | 1.520 | 2.622** | 3.487** | ---- |

* p < .05 ** p < .01 *** p < .001

Distribution of CANRISK scores (Risk of developing diabetes)



Predictors of Intent to change behaviour (N= 499 individuals; 135 with and 364 without diabetes)

| Intent to change (Nagelkerke R ² for model fit 0.223) | |
|---|----------------------|
| Predictors/ Variables | OR (95% CI) |
| Age** | 0.970 (0.947, 0.995) |
| Gender | 0.826 (0.503, 1.359) |
| Education | 1.156 (0.947, 1.412) |
| Has Hypertension | 1.367 (0.855, 2.186) |
| Has High Cholesterol | 1.172 (0.732, 1.876) |
| Has Diabetes | 1.166 (0.685, 1.982) |
| Self Efficacy To Change** | 1.361 (1.155, 1.604) |
| KnowledgeScores** | 1.362 (0.784, 2.365) |
| PerceivedConcernofRisk | 1.445 (1.201, 1.738) |

** Significant at $p < 0.05$

Predictors of Health Related Quality of Life and Self Reported Health Status (N= 299 **non-diabetics** who completed the CANRISK)

| HRQoL (R ² for model fit 0.142) | | | Self-reported Health Status (R ² for model fit 0.171) | | |
|---|--------|-------|---|-------|------|
| Predictors/ Variables | B | SE | Predictors/ Variables | B | SE |
| Has High Cholesterol | -2.087 | 2.394 | Has High Cholesterol** | -.291 | .125 |
| Had Stroke** | -9.542 | 3.488 | Had Stroke** | -.484 | .182 |
| Smoking | .532 | .985 | Smoking | -.097 | .051 |
| Ability to handle day-to-day demands** | 5.000 | 1.245 | Ability to handle day-to-day demands** | .209 | .065 |
| Ability to handle personal crisis | .808 | 1.093 | Ability to handle personal crisis | .100 | .057 |
| Self Efficacy To Change** | 1.883 | .909 | Self Efficacy To Change | .072 | .047 |
| CANRISK_Score** | -0.266 | .125 | CANRISK_Score** | -.018 | .006 |

** Significant at p<0.05

| Variable | CVD Knowledge | | Quality of Life | | Intent to Change | |
|-------------------|---------------|---------|-----------------|---------|------------------|--------|
| | B (SE) | t | B (SE) | t | B (SE) | OR |
| Age | -.005(.003) | -1.766 | -.005(.005) | -1.091 | -.049(0.013) | .952* |
| Sex | -.150(.057) | -2.606* | -.085(.093) | -.909 | -.594(.259) | .552* |
| Highest Education | .023(.022) | 1.039 | .037(.036) | 1.025 | .241(.108) | 1.273* |
| Has Hypertension | .125(.050) | 2.516* | -.219(.080) | -2.722* | .508(.227) | 1.663* |

*p<.05; **p<.005; ***p<.001.

having hypertension, female gender, younger age and higher education were associated with better knowledge

Discussion

- Overall, poor-fair HRQoL in this population
- High prevalence of chronic disease and lifestyle risk factors
- Older adults are well-informed of the risk factors
- Common factors related to HRQoL measures:
 - Ability to handle day-to-day demands
 - Confidence to make changes
 - Heart problems and stroke
- Anxiety/Depression strongly related to age, ability to handle demands, and confidence to make changes

Discussion

- This population needs support:
 - Resources beyond health education
 - Resources to help meet day-to-day demands
 - Links to programs and supports for healthy behaviours and increase social connectedness
 - Many exist, but may be underutilized
 - Awareness may be a factor (limited internet)
- Limitation:
 - Self-reported data

Next Steps

- CHAP-EMS:
 - Community Health Assessment Program through EMS
 - Health promotion and prevention, referrals to resources, link back to primary physician



Next Steps

- RCT:
 - 1 year
 - 12 Intervention sites, 12 Control sites
 - Guelph, York, Hamilton (more to come)
 - Weekly, drop-in sessions
 - Subsidized seniors' apartment buildings
- HABiT will be repeated post-intervention

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