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# Mixed Methods Study: Examining the Relationship between Therapeutic Self-Care Ability and the Occurrence of Adverse Events for Home Care Clients in Ontario

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# Home Care Safety:



- At least one-third of all home care clients and informal caregivers were found unprepared for self-care in their homes (Naylor et al., 2004).
- Lack of self-care skills may put clients, especially older adults in unsafe situations at home, leading to safety problems or adverse outcomes.



# Hospital Discharge Planning on Self-Care (Coleman, 2006):

% of Home Care Clients	Unprepared Self-Care Skills
20% of HC clients	Not told about important side effects
39% of HC clients	Not told what signs and symptoms to watch for at home
32% of HC clients	Not told when they could resume normal activities
29% of HC clients	Not told what activities they could or could not do at home



# Adverse Events (AE) in HC:

- Recent Pan-Canadian HC Safety study (Blais et al, 2013 & Doran et al, 2013):
  - Decline in ADL and IADL:
    - Important indicators of frailty
    - Associated with increased odds of AE in HC
- These findings raise the question:
  - To what extent self-care ability is associated with the occurrence of AE in HC

# Self-Care and Home Care Safety:

- Underlying all of this is a recognized concern about:
  - Readiness for aging adults for self-care at home
  - Quality of hospital discharge to prepare for self-care
  - Safety of home care services to support self-care skill
- Home care clients must possess or develop therapeutic self-care ability in order to manage their health safely at home.



# Definition of Therapeutic Self-Care:



- Sidani and Doran (2003):
  - The ability to take medications as prescribed
  - To recognize and manage symptoms that may be experienced such as pain
  - To perform and adjust regular activities of daily living
  - To manage changes in condition
- Focus on Disease Management



# Study Purpose:

- Using mixed methods approach:
  - Quantitative
    - To examine the relationship between TSC ability and AE in adult HC populations
  - Qualitative
    - To explore older HC clients and informal caregivers' perspectives of safety in relation to TSC and informal caregiving



# Instrument: Therapeutic Self-Care Scale (Sidani and Doran, 2009)

- 12-item instrument that captures domains of self-care:
  - Taking prescribed medications
  - Recognizing and managing symptoms
  - Performing and adjusting ADL and IADL
  - Knowing when and how to get help
  - Adjusting to lifestyle changes
- 5-point numeric rating scale with “not at all” and “very much”, with higher total scores indicating high levels of self-care ability



## THERAPEUTIC SELF-CARE SCALE (Sidani and Doran, 2009)

1. Do you know what medications you have to take?

2. Do you understand the purpose of the medications prescribed to you?

3. Do you take the medications as prescribed?

4. Can you recognize changes in your body (symptoms) that are related to your illness or health condition?

5. Do you know and understand why you experience some changes in your body (symptoms) related to your illness or health condition?

6. Do you know what to do (things or activities) to control these changes in your body (symptoms)?

7. Do you carry out the treatments or activities that you have been taught to manage these changes in your body (symptoms)?

8. Do you do things or activities to look after yourself and to maintain your health in general?

9. Do you perform your regular activities (such as bathing, shopping, preparing meals, visiting with friends)?

10. Do you know whom to contact in case of a medical emergency?

11. Do you know whom to contact to get help in carrying out your daily activities?

12. Do you adjust your regular activities when you experience body changes (symptoms)?

# Outcomes of Interest:

1. Use of Health Care resources	2. Safety Outcomes
<b>New ER visits</b>	<b>New Falls</b> (in last 90 days)
<b>Unplanned hospital admissions</b>	<b>Unintended weight loss:</b> (5% or more in the last 30 days)
	<b>Newly detected UTI</b>
	<b>Caregiver distress</b> (Decline in health of caregiver; feelings of distress, anger or depression)
	<b>ADL decline</b> (ADL status has become worse; more impairment in self-performance)
	<b>Medication non-compliance</b> (Compliance less than 80% of time)
	<b>New Pressure Ulcer or Ulcer Deterioration</b>

# Using Multiple Data Sources:

- Use of four data sources from Institute of Clinical and Evaluative Sciences (ICES) in Ontario, Canada:
  - 1. HOBIC (Health Outcomes for Better Information and Care) in Home Care:
    - Standardized client outcome data related to nursing care
    - Therapeutic Self-Care Scale
  - 2. RAI-Home Care(Resident Assessment Instrument)
    - Safety outcomes
  - 3. NACRS (National Ambulatory Care Reporting System)
    - ED visits
  - 4. DAD (Discharge Abstract Database)
    - Hospital admissions

# Study Method:



- Retrospective cohort design was used to conduct secondary data analysis
- Final sample of cohort:
  - A total of 1470 long-stay adult home care clients with therapeutic self-care scale between period from 04/2010 to 09/2011
- Cohort follow-up using RAI-HC, DAD and NACRS:
  - Study cohort were followed-up to look for use of health care resources and the occurrence of safety outcomes up till 03/2012



# Data Analysis:



- Therapeutic Self-Care Scores were dichotomized into two groups:
  - **1. Low self-care group (score 0 to 4):**
  - **2. High self-care group (score 5):**
- Statistical Test: Logistic Regression Analysis using Backward Stepwise Selection

# Cohort Characteristics and Follow-up:

Cohort characteristics	N=1470	Total percentage %
Over age 65	1026	69.8
Over age 75	734	49.9
Mean age: 71.9		
Female	832	56.6
With Subsequent RAI- HC assessments	615	41.8
Long-Term Care Admissions	81	5.5
Death	230	15.6
New Hospital Visits	717	48.8
New ER Visits	836	56.9





## Prevalence of Adverse Events for Home Care Clients:

Adverse Events (From March 2011 to March 2012)	Prevalence rates %(n/N)
1. New ER Visits (N=1470)	56.9% (n=836)
2. ADL Decline ((N=615)	51.7% (n=318)
3. Unplanned Hospitalization (N=1470)	48.8% (n=717)
4. Falls (N=615)	35.0% (n=215)
5. Caregiver Stress (N=615)	27.0% (n=166)
6. Unintended Weight Loss (N=615)	13.5% (n=83)
7. Medication Non-Compliance (N=615)	11.0% (n=68)
8. UTI (N=615)	6.5% (n=40)
9. Pressure Ulcer (N=565)	6.0% (n=34)

**Summary of Significant Findings for Therapeutic Self-Care in  
Relation to Adverse Events:**

<b>Adverse Events</b>	<b>Prevalence rates %(n/N)</b>	<b>P values (<math>\leq .05</math>)</b>	<b>Adjusted Odds Ratio for Therapeutic Self-Care</b>	<b>95% Confidence Interval</b>
<b>New Hospital Visit (N=1470)</b>	48.8% (n=717)	0.03	0.74	0.56, 0.96
<b>ADL Decline (N=615)</b>	51.7% (n=318)	0.04	0.58	0.40, 0.84
<b>Falls (N=615)</b>	35% (n=215)	0.05	0.64	0.42, 0.99
<b>Unintended Weight Loss (N=615)</b>	13.5% (n=83)	0.05	0.58	0.34, 0.99
<b>Medication Non-Compliance (N=615)</b>	11% (n=68)	<0.00	0.45	0.25, 0.78

# QUALITATIVE RESEARCH QUESTIONS:

- (1) Client and caregiver experiences with therapeutic self-care and informal caregiving**
- (2) Safety challenges and concerns related to therapeutic self-care and care-giving activities**
- (3) Support needed to address safety challenges and concerns**
- (4) The role of home care professionals in supporting therapeutic self-care and care-giving experiences.**

# QUAL Design and Method:

- Qualitative Descriptive Study (Sandelowski, 2000)
  - Comprehensive summary of descriptions of safety in relation to TSC and informal caregiving
- One-one, in-depth, semi-structured interviews with HC clients and their informal caregivers

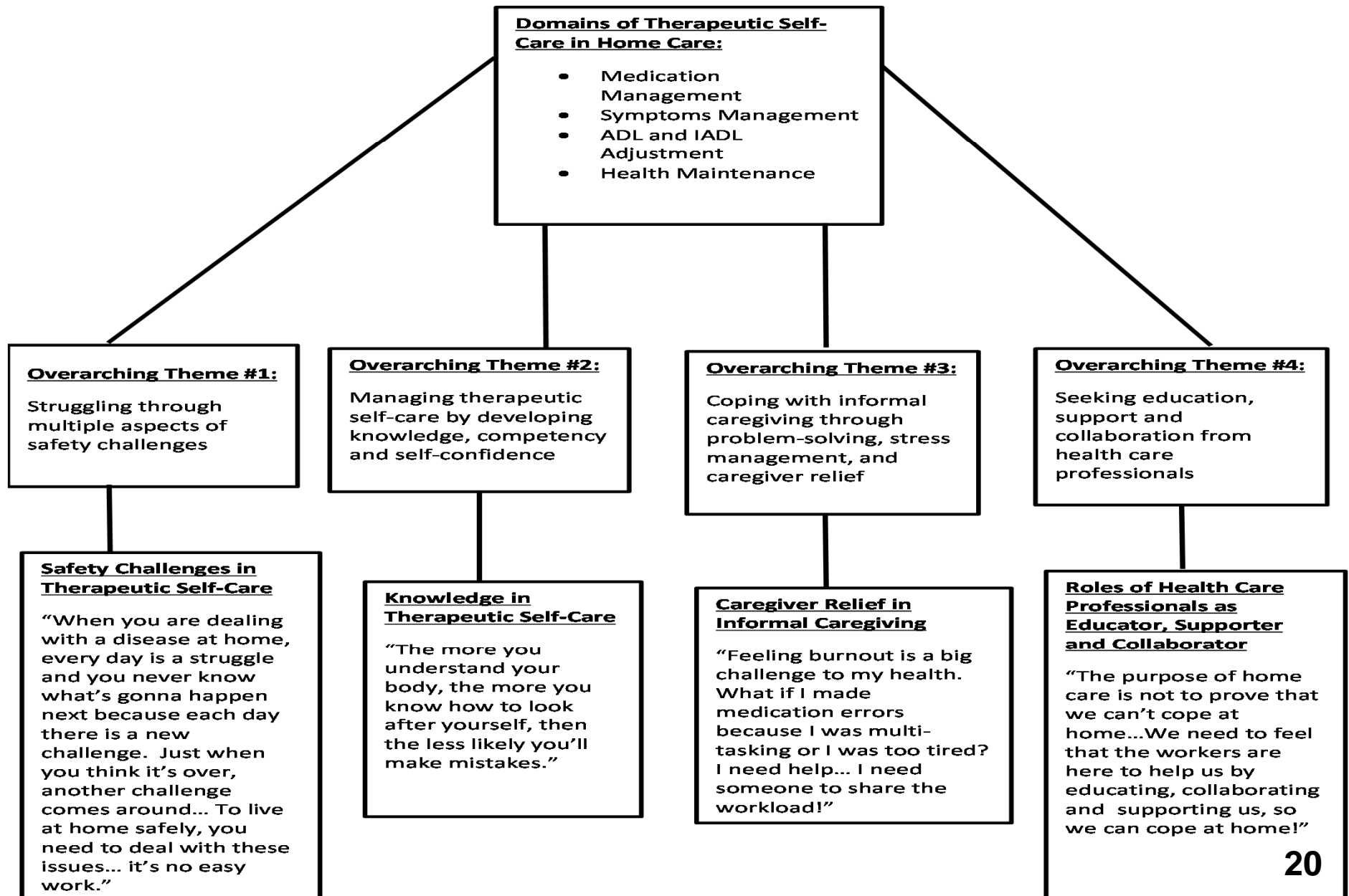
# Study Participants:

- **Home Care Clients (n=15):**
  - 8 Female and 7 male
  - Over age of 65 (n=8)
  - Over age of 75 (n=7)
- **Informal Caregivers (n=15):**
  - 10 Female (5 daughters, 4 wife and 1 sister)
  - 5 male (3 husbands, 2 sons)



## Thematic Tree

### The Concept of Home Care Safety in Relation to Therapeutic Self-Care and Informal Caregiving



# Struggling Through the Multiple Aspects of Safety Challenges

1. Physical Safety (falls, fatigue)
2. Emotional Safety (stress, burden of care)
3. Cognitive Safety (making care decisions)
4. Instrumental Safety (medication management)
5. Financial Safety (lack of funding support)
6. Environmental Safety (fall hazards)
7. Technological Safety (medical equipment)
8. Cultural Safety (language barriers)



# What facilitates TSC?

- 1. Knowledge in TSC:
  - Knowledge in Medication
  - Knowledge of “how to read your body”
  - Prevention of further health problems
- 2. Competence in TSC:
  - Developing care routines
  - Active participation
  - Setting goals
- 3. Self-Confidence in TSC:
  - Time
  - Self-determination
  - Positive feedback



# Summary of mixed methods:



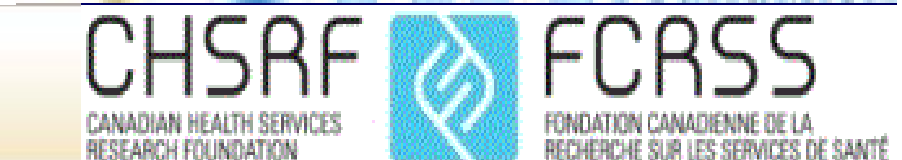
- Clients with low measured therapeutic self-care scores
  - Higher user of health care resources, including acute care hospitalizations
  - High risk areas including medication non-compliance, ADL decline, falls and unintended weight loss
- Understanding the multi-dimensional aspects of safety challenges in TSC and informal caregiving:
  - Physical, emotional, cognitive, instrumental, financial, environmental, technological and cultural

# Conclusion:

- Informal caregivers need to be assessed for safety concerns along with HC clients.
  - Safety concerns of TSC and informal caregiving are profoundly inter-connected
- The need for HC professionals to empower clients to develop their TSC ability.
  - Knowledge, competence and self-confidence
  - Education, support and collaboration



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# Question?



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