Awareness and Utilization of Public Health Core and Nursing Competencies Among Public Health Nurses in Ontario: A Pilot Study

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Outline of Presentation

- Purpose of pilot study
- Literature review
- Theoretical framework
- Research questions
- Study methodology
- Summary of findings
- Study discussion and implications
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- Conclusion

Purpose of Pilot Study

To identify and describe the extent of influence that public health core and public health nursing competency sets (PHAC, 2007; CHNC, 2009) have had on public health nursing workforce development in Ontario since their release. Specifically:

- Awareness of competency sets
- Utilization of competency sets
- Barriers and facilitators

Literature Review

- Limited empirical/grey literature on awareness levels
- Some literature available on utility/application of competencies in academia and public health organizational contexts
- Adoption influenced by various barriers and facilitators at various system levels
- Comparisons among various groups (i.e. reflects organizational level factors)

Theoretical Framework

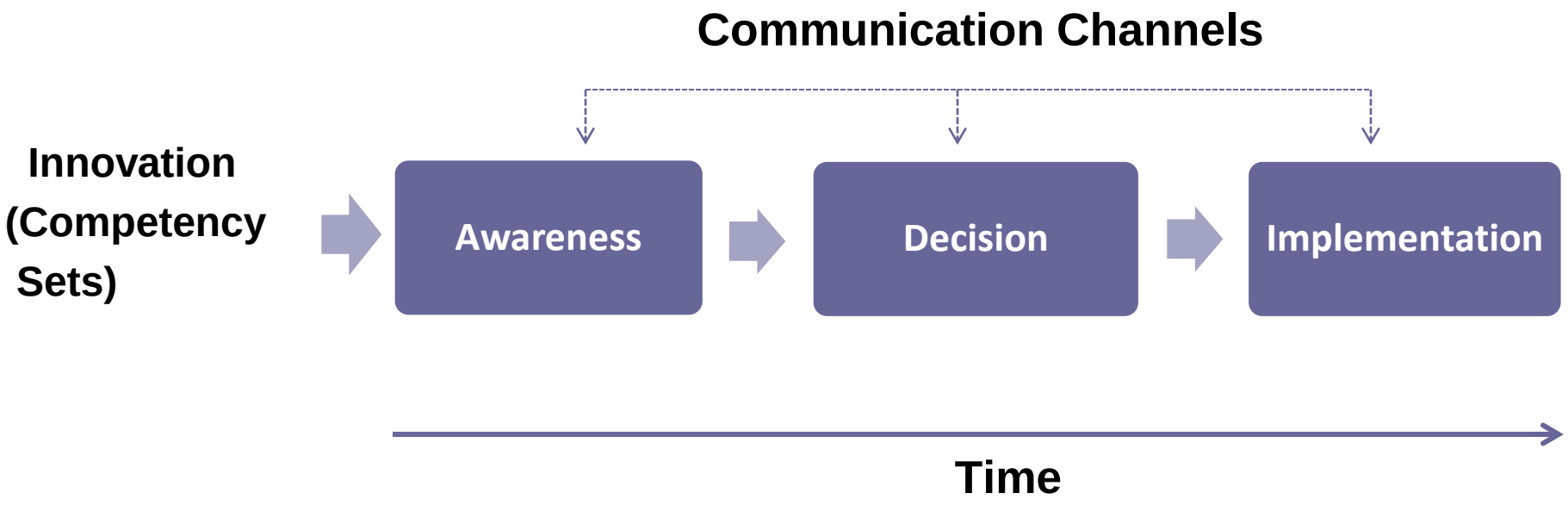
Diffusion of Innovation (DOI) Theory (Rogers, 2003)

Diffusion: "the process in which an innovation is communicated through certain channels over time among the members of a social system."

- **Four key concepts of DOI Theory:**
  - *Innovation*
  - *Communication Channels*
  - *Time*
  - *Social System*

Theoretical Framework: Diffusion of Innovation Theory (Rogers, 2003)

Innovation-Decision Process Model (Rogers, 2003)



Modified from Leeman, Jackson and Sandelowski, 2006

Research Questions

1. Are PHNs in Ontario health units aware of the Canadian public health core and nursing competency sets? (*Awareness*)
2. If PHNs are aware of public health core and nursing competency sets, how did they learn of them? (*Communication Channels*)
3. To what degree are the public health core and nursing competency sets being used by PHNs working in Ontario public health units? (*Decision*)
4. For what purposes are competency sets being used in the public health units? (*Implementation*)

Research Questions

5. Are there differences among front-line public health nursing staff and management regarding the:

   a) level of awareness of public health core and nursing competency sets, and (*Awareness*)

   b) level of utilization of the same competency sets, in the public health units? (*Decision*)

6. What are the barriers preventing the use of competency set documents among PHNs and within health units? (*Implementation*)

7. What are the facilitators promoting and supporting the use of competency set documents among PHNs and within health units? (*Implementation*)

Study Methodology

Design of Study:

- A descriptive, non-experimental design
- Approximate replication of a study by Oppewal, Lammana and Glenn (2006)

Selection Criteria:

- Public Health Nurse (as per definition in the Health Protection and Promotion Act, 1990)
- Employed full-time or part-time
- Working in an Ontario Public Health Unit (36 Public Health Units)

Study Methodology

Data Collection:

- Electronic, anonymous questionnaire, on-line via Survey Monkey®
- On-line questionnaire – open 4 months between March 1 - July 1, 2013

Data Analysis:

- Quantitative data -
  - Descriptive statistical analysis
  - T-test for independent sample means
- Qualitative data -
  - Content analysis

Summary of Study Findings

Sample:

- N = 221 (surveys analysed)
- Response rate = 8.1% (proxy measure from CNO population data)
- Sample fairly representative of the population:
  - Mostly employed full-time (91.4%)
  - 2/3 baccalaureate prepared (67.4%)
  - 6/7 health unit peer groups represented, mainly urban or urban/rural mix peer groups (75.5%)
  - Mean # of Years RN/PHN practice (19.5/13.4 years)
- Masters prepared (26.3%)
- Community Health Nursing certified (13.6%)

Summary of Study Findings

Q1: Level of Awareness of Competency Sets?

Level of Awareness	Core Competencies N (%)	PHN Competencies N (%)
Not Familiar/Heard of Competencies	22 (10.0%)	42 (19.0%)
Minimum-Moderate Familiarity	138 (62.4%)	111 (50.2%)
Very Familiar	50 (22.6%)	46 (20.8%)
Non-response*	11 (5.0%)	22 (10.0%)
Total	221 (100%)	221 (100.0%)

* Non-response to on-line question or skipped responses related to skip logic

Summary of Study Findings

Q2: Method of communication by which PHNs learned of competency sets?

Communication Channel	Core Competencies n = 221 (%)	PHN Competencies n = 221 (%)
Work colleagues/activities	103 (46.6%)	85 (38.5%)
Received copy of document	64 (29.0%)	62 (28.1%)
PHAC/CHNC	49 (22.2%)	45 (20.4%)
Management/employer	60 (27.1%)	44 (19.9%)
Launch campaigns/workshops	37 (16.7%)	38 (17.2%)

Summary of Study Findings

Q3: Level of utilization of competency sets by PHNs within public health units?

Level of Utilization	Core Competencies n = 221 (%)	PHN Competencies n = 221 (%)
Not/No Longer Using	17 (7.7%)	23 (10.4%)
Contemplating/Planning Use	17 (7.7%)	16 (6.4%)
Limited Use	64 (29.0%)	59 (26.7%)
Moderate Use	56 (25.3%)	43 (19.5%)
Extensive Use	18 (8.1%)	11 (5.0%)
Skipped Question	29 (13.3%)	21 (9.5%)
Non-Response	20 (9.0%)	48 (21.7%)
Total	221 (100.0%)	221 (100.0%)

Summary of Study Findings

Q 4: Applications/Use of Competency Sets?

Application of Competency Set	Core Competencies n = 221 (%)	PHN Competencies n = 221 (%)
Professional Development Resource	80 (36.2%)	61 (27.6%)
Educational Needs	80 (36.2%)	57 (25.8%)
Orientation Purposes	73 (33.0%)	53 (24.0%)
Performance Evaluations	73 (33.0%)	61 (27.6%)
Human Resource Processes	55 (24.9%)	44 (19.9%)

Summary of Study Findings

- Q 5: Differences on level of awareness and utilization of competency sets between front-line staff/management?

Awareness:

- Statistically significant difference for core competencies ($t(82.7) = -3.057$, $p = .003$)
- No statistically significant difference for PHN competencies ($t(69.0) = -1.78$, $p = .079$)

Utilization:

- No statistically significant difference noted for both competency sets
  - Core Competencies ($t(76.6) = -.129$, $p > .05$)
  - PHN Competencies ($t(65.4) = .177$, $p > .05$)

Summary of Study Findings

Q 6: Barriers precluding uptake of competency sets?

Core Competencies		PHN Competencies	
Theme	**Frequency**	**Theme**	**Frequency**
Lack of organizational promotion/staff awareness	27	Time	21
Time	26	No organizational supports (resources/tools/people)	14
Leadership	16	Lack of organizational promotion/staff awareness	12
Competing priorities	16	Competing priorities	9
Organizational structures/processes	13	Leadership	8

Summary of Study Findings

Q 7: Facilitators supporting use of competency sets?

Core Competencies		PHN Competencies	
Theme	**Frequency**	**Theme**	**Frequency**
Organizational leadership to influence uptake	56	Organizational leadership to influence uptake	53
Integration into other organizational process or functions	25	Integration into work of professional practice team/council	21
Integration into performance appraisal tools	21	Dedicated staff person for professional development	20

Study Discussion and Implications

Level of Awareness:

- Varying degrees of level of awareness of documents
- Some differences noted between management and staff (core competencies only) – time, sample size, adopter/organizational characteristics

Communication Channels:

- Multiple channels used for innovation dissemination
- Communication channels to disseminate information aligned with DOI Theory: mass media, interpersonal

Study Discussion and Implications

Utilization:

- Less prevalent than awareness
- Applications consistent with literature: education/training, professional development, HR processes/functions
- No statistically significant difference in uptake between managers and staff (core and PHN competencies) – influence of leadership on adoption and implementation (qualitative data)

Barriers/Facilitators:

- Barriers identified similar for both competency sets
- Related to leadership, organizational processes and functions
- Strong nursing leadership influence for PHN competency uptake

Study Discussion and Implications

Policy and Practice:

- Progress on levels of awareness (knowledge diffusion)
- Shift efforts to increase adoption and utilization (knowledge translation)
- Utility of documents validated - influence organizational processes and professional development to support competency-based workforce development in other literature
- Key factors influencing uptake: leadership/organizational – leaders gatekeeper to resources, time, organizational processes, communication, decision-making, etc.

Limitations

- Limited information on psychometric testing of questionnaire – testing for validity and reliability
- Non-response bias: respondent error, technological issues, etc. – impact to sample size, statistical conclusion validity
- Potential issue with sample size – power analysis, potential for type II error
- Non-probability sampling – self-selection bias, over/under representation of peer groups or professionals

Conclusion

- Results contribute to limited knowledge/evidence on dissemination and application of competencies
- Results suggest:
  - Successful knowledge dissemination efforts;
  - Utility in the competencies for workforce development; and
  - Further knowledge translation efforts for implementation
- Future consideration for workforce planning to support discipline specific competency set uptake among other public health disciplines

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