




Foto Marianne Nilsson


The QiA questionnaire, a new version is born. Results from the validation and reduction of the form. And some thoughts on making a cultural adaption to a "lagom" Swedish version.

Presented at PMhealth – Nationell workshop i Psykometri och Metrologi inom hälsovetenskaperna Högskolan i Kristianstad 10-12/6 2019

Lynn Foster-Johnson Ph.D. Assistant Professor,  
Marjorie M. Godfrey Ph.D. MS, BSN, FFAN, and  
Mats Nilsson Ph.D., BSC, MSC.





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## Quality improvement in health care

- Improve capability at the front line of healthcare
- Helping through leading and coaching
- Focus on interprofessional healthcare improvement teams
- Using a team coaching model



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## Quality improvement in health care

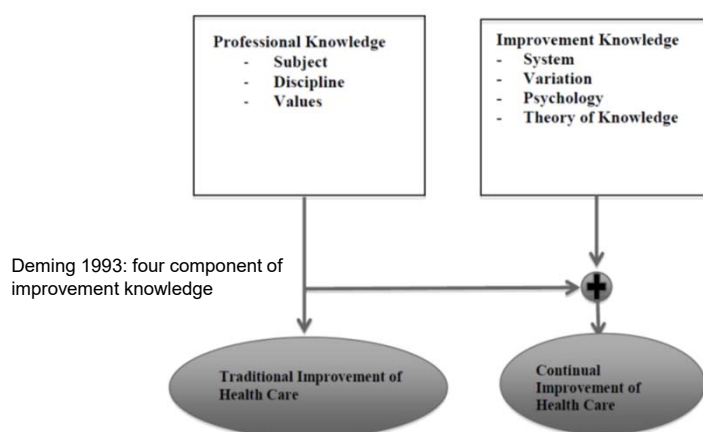
- Understanding:
- Variation
- Psychology of change
- Theory of knowledge
- Iterative cycles of learning (Shewhart/Deming)

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## Professional and improvement knowledge create profound knowledge



Godfrey M. Improvement Capability at the Front Lines of Healthcare. Helping through Leading and Coaching  
Dissertation School of Health Sciences, Jönköping University 2013

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## How to evaluate Quality improvement through collaborative training in daily healthcare work?

- Collaborative training –learn or attempt to learn together
- Capitalize on one another's recourses and skills opposed
- Interaction by sharing experiences, having different roles
- Involves face-to-face conversations and online forums
- Involves improvement work between learning sessions
- Collaboratives are coached between learning sessions
- Teams are multidisciplinary

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## What is the QIA?

- 67 item scale consisting of 3 parts
  - Frequency of QI skill use (*35 items*)
  - Confidence in conflict management/communication specific to QI (*12 items*)
  - Agreement with statements about organizational factors related to QI (*20 items*)
- Used in the TDIMA learning collaborative training

5. This question asks you about improvement measurement tools or skills. Please rate how well you can do each of them. If any of them are unfamiliar to you, select N/A.

	Not at all	Slightly	Moderately	Very	Extremely	N/A
Define measures (conceptual & operational definitions)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use Microsoft Excel (basic / fundamental skills)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Create Pareto Charts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Develop a data collection plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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## Use of QIA questionnaire

- Measure the effect of quality improvement collaboratives
- Measure at baseline before collaborative starts
  - To customize learning collaborative
- Measure after completed collaborative
  - Evaluate responsiveness
- Team coaching program duration between 12 and 18 months
- Program in USA, Ireland, England and Sweden

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## Problems with current version

- To many items
  - Reduction necessary
  - Determine poorly performing and redundant items
- Lacks a psychometric validation
  - Determine psychometric properties
- An imperfect Swedish translation exists
  - Needs a proper translation and cultural adaption

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## Result from the reduction of items

- Reduced the number of items from 67 to 40
- The Confirmatory factor analysis resulted in eight dimensions divided into two areas supporting the theory from Deming/Batalden

Quality improvement skills	Management/organisational factors
System (6 items)	Team-Awareness of Self (3 items)
Knowledge (5 items)	Team-Awareness of Others (3 items)
Variation (10 items)	Microsystem Leader (7 items)
Psychology of change (3 items)	Organization Leader (3 items)

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## Rasch analysis, quality improvement skills

### Quality improvement skills pre collaborative

System (6 items, 1 fit residual outside  $\pm 2,5$ )  
 Knowledge (5 items, 2 items disordered, 1 fit residual just outside  $\pm 2,5$ )  
 Variation (10 items, 4 items disordered, 3 fit residual just outside  $\pm 2,5$ )  
 Psychology of change (3 items, 3 items disordered\*)  
 No residuals are correlated over  $\pm 0,4$

\*Use effective meeting skills (timed agendas/assign meeting roles)

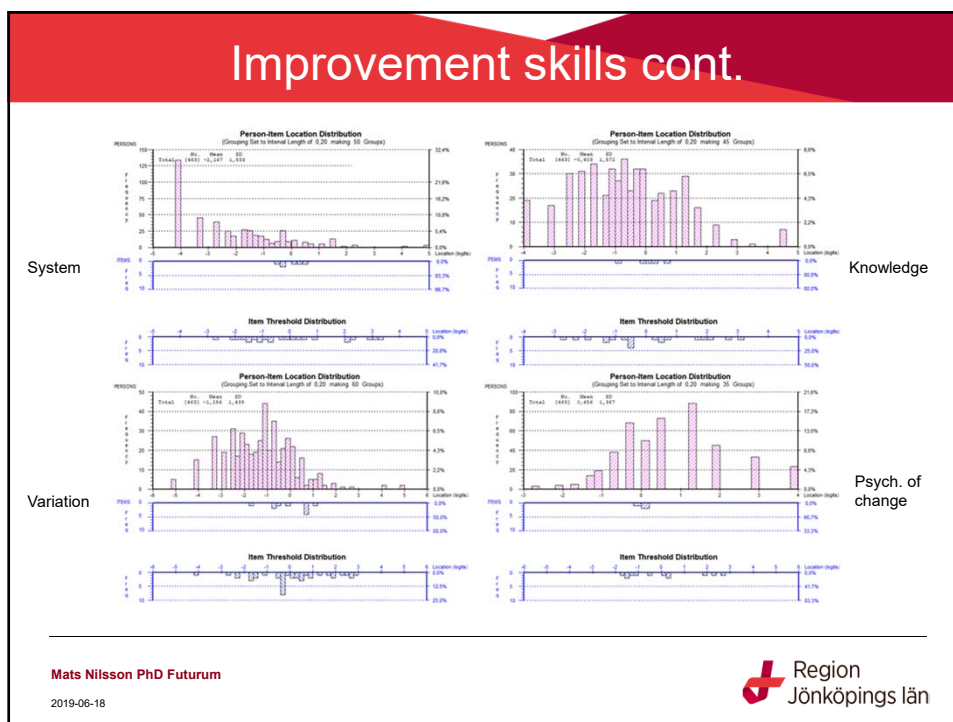
\*Use brainstorming and multivoting in meetings

\*Use observation skills

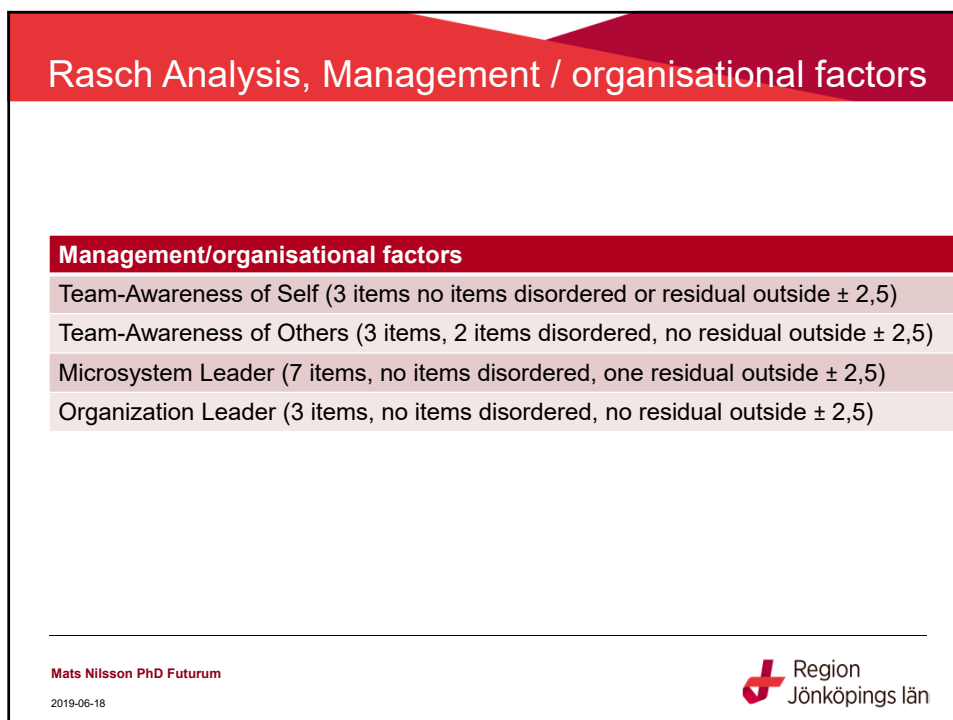
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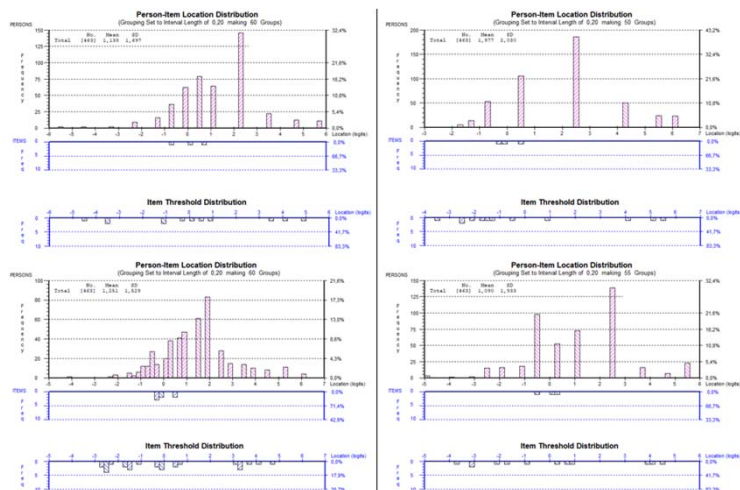


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## Rasch Analysis, Management / organisational factors



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## Conclutions

- The theory of Quality improvement seems to be supported by data
  - More data is available, and post data support improvement
- The quality improvement skills seems to behave as expected.
- Pre knowledge (ability) should be low on the skills items
- Management/organisational factors seems to work as expected.
- People with experience of team leaders have knowledge on:
  - Team-Awareness of Self and others
  - Leading microsystems
  - Leading organisations

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## How to translate item responses?

- How to translate item responses?
- *Förbättringsvetenskap inom hälso- och sjukvård samt omsorg innefattar olika verktyg, aktiviteter och färdigheter. I denna fråga, skattar du din förmåga i förhållande till var och en av nedanstående: Om någon av dem är okänd för dig så väljer du EA (ej aktuellt).*

Not at all (1)	Slightly (2)	Moderately (3)	Very (4)	Extremely (5)	N/A (6)
Mycket låg (1)	Låg (2)	Måttlig (3)	Hög (4)	Mycket hög (5)	EA (6)

- Problem Extremely is not Swedish “Lagom”
- How handle N/A?

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## How to translate item responses?

- How to translate item responses?
- *Den här frågan handlar om dina färdigheter vad gäller mätningar i förbättringsarbete. Bedöm hur din färdighet i att genomföra var och en av dessa. Om någon av dem är okänd för dig väljer du EA (ej aktuellt)*

Not at all (1)	Slightly (2)	Moderately (3)	Very (4)	Extremely (5)	N/A (6)
Mycket låg (1)	Låg (2)	Måttlig (3)	Hög (4)	Mycket hög (5)	EA (6)

- Problem Extremely is not Swedish “Lagom”
- How handle N/A?

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## How to translate item responses?

- *I vilken grad håller du med om vart och ett av följande påståenden?*
- *Om du tänker på kulturen och arbetsmiljön på din arbetsplats, i vilken omfattning stämmer följande påståenden?*

Strongly Disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly Agree (5)
Tar avstånd helt	Tar delvis avstånd	Varken instämmer eller tar avstånd	Instämmer delvis	Instämmer helt

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## Naming and blaming is "no no" in Sweden (except for Social media)

- I am comfortable giving **negative** feedback (US version)
- I am comfortable giving **positive** feedback (Swedish version)



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## Next year

- What is the effect of the collaboratives.
- Compare pre- and post with Svenssons method