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CHAPTER 6

MEASURING RENEWED EXPERTISE FOR INTEGRATED CARE AMONG HEALTH- AND SOCIAL-CARE PROFESSIONALS: DEVELOPMENT AND PRELIMINARY VALIDATION OF THE ICE-Q QUESTIONNAIRE

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ABSTRACT

Accumulations of health and social problems challenge current health systems. It is hypothesized that professionals should renew their expertise by adapting generalist, coaching, and population health orientation capacities to address these challenges. This study aimed to develop and validate an instrument for evaluating this renewal of professional expertise. The (Dutch) Integrated Care Expertise Questionnaire (ICE-Q) was developed and piloted. Psychometric analysis evaluated item, criterion, construct, and content validity. Theory and an iterative process of expert consultation constructed the ICE-Q, which was sent to 616 professionals, of whom 294 participated in the pilot (47.7%). Factor analysis (FA) identified six areas of expertise: holistic attitude towards patients (Cronbach's alpha [CA] = 0.61) and considering their social context (CA = 0.77), both related to generalism; coaching to support patient empowerment (CA = 0.66); preventive action (CA = 0.48); valuing local health knowledge (CA = 0.81); and valuing local facility knowledge (CA = 0.67) point at population health orientation. Inter-scale correlations ranged between 0.01 and 0.34. Item-response theory (IRT) indicated some items were less informative. The resulting 26-item questionnaire is a first tool for measuring integrated care expertise. The study process led to a developed understanding of the concept. Further research is warranted to improve the questionnaire.

Keywords:

Fragmentation, integration, interprofessional research, professionalism, questionnaire designs

INTRODUCTION

Most health- and social-care professionals are specialists trained to combat the acute, single diseases of the past, but not necessarily today's multiple and chronic ones (Jones, Podolsky, & Greene, 2012). Populations increasingly suffer from multimorbidity, especially in the context of deprivation, which frequently involves the accumulation of medical and social conditions. Evidence indicates that people with multiple chronic conditions already represent 50% of the burden of disease (Anderson, 2011; Barnett et al., 2012). As a consequence, patients must consult a broad range of specialists, at least one for each problem. This is arguably the root of the unsustainable functioning of healthcare systems (Plochg, Klazinga, Schoenstein, & Starfield, 2011; Plochg, Klazinga, & Starfield, 2009).

Emerging evidence indicates that having multiple, complex social and/or health problems is associated with poor outcomes in terms of quality of life (Fortin, Soubhi, Hudon, Bayliss, & van den Akker, 2007), longer hospital stays (Wright et al., 2003), more avoidable admissions and complications (Wolff, Starfield, & Anderson, 2002), higher mortality (Gijssen et al., 2001), increased service use (Sallisbury, Johnson, Purdy, Valderas, & Montgomery, 2011; Wolff et al., 2002), and higher costs (Friedman, Jiang, Elixhauser, & Segal, 2006; Nagl, Witte, Hodek, & Greiner, 2012).

It is increasingly acknowledged that a renewal of professional expertise is warranted to fit the changing burden of disease (Plochg et al., 2009). Professionals who are equipped to address the contemporary health needs can provide effective and efficient services (e.g. Barnett et al., 2012; Jurgutis, Vainiomäki, Puts, & Jukneviute, 2012; Tinetti, Fried, & Boyd, 2012). Renewed expertise draws on three major, though separate, debates in the literature. First generalism, a response to (sub)specialization, and consequently fragmentation in care for multimorbid patients (e.g. Barnett et al., 2012; Jurgutis et al., 2012; Luijckx et al., 2012; Starfield, 2011; Tinetti et al., 2012). Second, coaching in order to empower patients to self-manage their care, in which professionals are increasingly present due to the chronic nature of diseases (Hibbard, Greene, & Tusler, 2009; Thompson, 2007). In this view, a responsive professional is favoured over paternalism (Loignon & Boudreault-Fournier, 2012). Third, population health orientation and prevention

(Novick, Morrow, & Mays, 2008), which combats immature population health services (Lundy, 2010; Yach, Hawkes, Gould, & Hofman, 2004). Future health and social-care professionals should develop integrated care expertise in these three areas (Box 1).

To develop the concept and start building its empirical evidence base, measurement tools are imperative. The objective of this article is to describe the first attempt at developing and validating an instrument for measuring integrated care expertise among health- and social-care professionals.

METHODS

The Integrated Care Expertise Questionnaire (ICE-Q) was constructed and validated in four phases (Figure 1).

Phase I: Construction of the questionnaire

The aim of this phase was to select and/or construct items that cover integrated care expertise. The literature was explored for the three areas of expertise, i.e. generalism, coaching, and population health orientation. We performed searches for each in the MEDLINE (PubMed) and Google Scholar databases by using controlled vocabulary and text words, covering (equivalents of) the terms “questionnaire” and “capacities.” New items were drafted if none were available in existing questionnaires. In this process we used qualitative data gathered in focus groups and semi-structured interviews (professional, patient, policy, and insurer perspectives), within the context of a participatory action research project in deprived neighbourhoods in the cities of Utrecht and Amsterdam (The Netherlands). Poor health outcomes had driven their city councils and insurers to support collaboration between health- and social-care professionals. These collaborations were the reason to study integrated care expertise thoroughly beforehand.

Box 1. Description of the three initial areas of integrated care expertise***Generalism***

There is a well-established body of literature on generalism. It refers to a holistic attitude towards the patient. Concepts such as “person-focused care” (Starfield, 2011) and “whole-istic care” (Royal College of General Practitioners, 2012) are used. Generalism recognizes a particular problem (for which someone consults a professional) as being interrelated with other conditions (medical and social) and contextual factors. As part of integrated care expertise, generalism combats fragmentation by considering the patient as a whole.

Coaching

Coaching towards patient empowerment is a response to changes in the information asymmetry and the increase in chronic conditions. First, patients are increasingly equipped with information. This outdates traditional, i.e. paternalistic, professional-patient relationships. Second, chronic conditions are part of patients’ day-to-day lives. Coaching equips to self-manage life to the greatest extent possible. Information does not automatically translate into empowered patients due to individual starting points (Hibbard et al., 2009), which therefore need to be responded to (Thompson, 2007). As part of integrated care expertise, coaching acknowledged the role of patients.

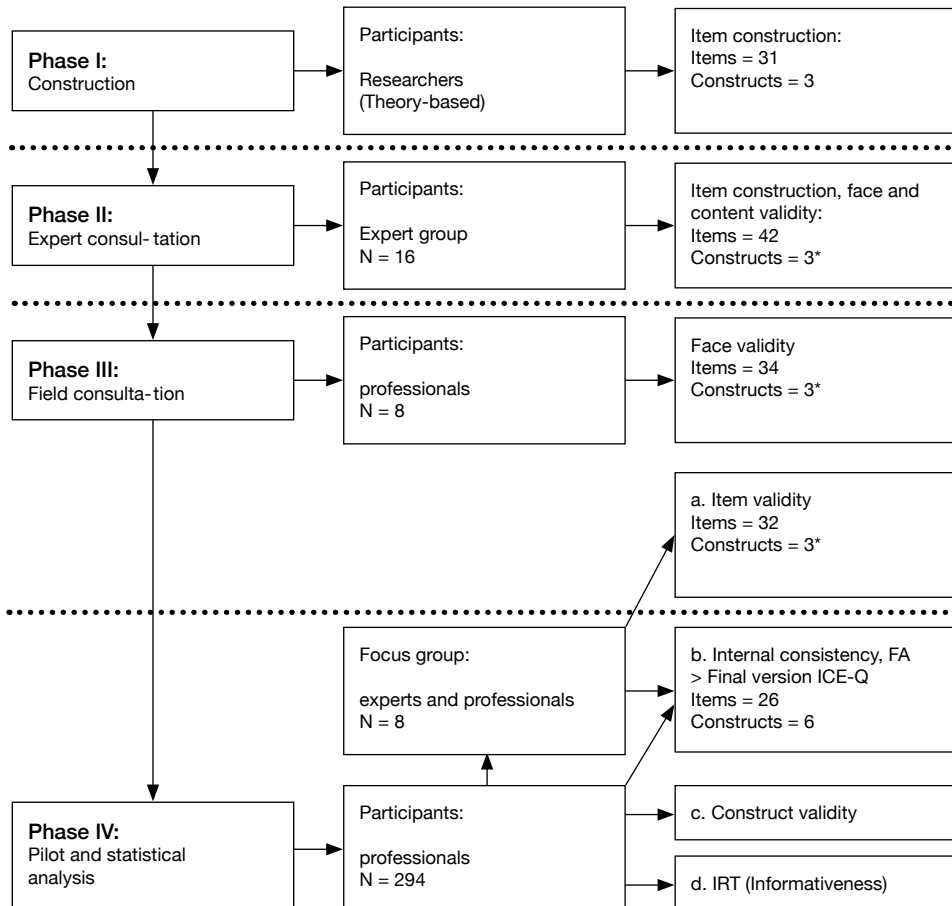
Population health orientation

A population health orientation concerns actions while thinking in terms of opportunities for populations (Mackenbach & Van der Maas, 2008). It counterbalances the individual biomedical paradigm (Kindig & Stoddart, 2003), and acknowledges that individual and population health are connected (Arah, 2009; Getz, Kirkengen, & Ulvestad, 2011). As part of integrated care expertise, population health orientation stimulates professionals to talk about prevention during consultations, approach the population to inform them about risks and averting them, and organizing and referring to disease prevention activities.

Phase II: Expert consultation

In the second phase, the items were presented to experts of the research project (researchers and policymakers, $n = 16$). The aim was to examine whether experts confirmed the three areas of integrated care expertise, whether items covered them well (content validity), whether items were relevant, and whether items were well understood (face validity). If necessary, new items were constructed jointly. Each of the experts was consulted separately, mainly in writing. Additionally, three meetings were organized.

Figure 1. Flow chart of the study process



* During these steps, a sub-aspects of 'generalism' had already been identified. These were confirmed, and adopted as such in Phase IVb.

Phase III: Field consultation

In the third phase, the questionnaire was tested among potential participants (health and social care). The aim of this phase was to test whether the questionnaire tapped into professionals' perception of their environment, and whether they understood the questionnaire (face validity). Information was collected by organizing face-to-face sessions ($n = 8$) during which the questionnaire was filled out and thoughts were shared about what crossed the participant's mind while doing so.

Phase IV: Pilot and statistical analysis

An invitation to fill out the resulting ICE-Q digitally (LimeSurvey) was sent to medical- and social-care professionals ($n = 616$) in the selected deprived neighbourhoods in February 2012 for a pilot. The invitees included all professions that deliver extramural care. Professionals received a reminder after approximately 4, 8, and 12 weeks. Ethical approval was not required under Dutch law, since no patients were involved. Questionnaire data were stored anonymously.

In addition, the questionnaire included items for collecting contextual (possibly confounding) information, such as individual characteristics of participants, their work environment, and motives. Opportunities for making comments (on content and/or questionnaire) were provided. These items were also used for validation and interpretation purposes.

Validation of the psychometric properties of the ICE-Q (plan based on (Terwee et al., 2007)) consisted of four steps (Figure 1: Phase IV, a–d), explained hereafter. IBM SPSS version 19 was used for statistical analyses.

Item validity

Item validity was analysed by assessing item's discriminatory power (distribution), and redundancy between items. Items with $\geq 95\%$ of the responses in one category (low discriminatory power) were removed. Redundancy was assessed by interpreting the inter-item correlation using Cronbach's alpha (CA). Items were considered to possibly be redundant if $|CA| \geq 0.9$. In addition, qualitative information in the open text fields (comments) was assessed, and professionals and

policymakers (n = 8) reflected on and discussed interpretation(s) of items.

Internal consistency and FA

Internal consistency was assessed by calculating CAs for each area of expertise. CA does not measure unidimensionality, but is appropriate to conform whether a set of items is actually unidimensional (Cortina, 1993). Two exploratory Factor Analyses (FAs) were used to study the areas of expertise in-depth, maximizing the resulting constructs by an iterative interpretation process.

At this point, the ICE-Q was determined and its psychometric properties retrieved. Item-total correlations (internal consistency) were calculated, and considered satisfactory for the possible identification of a sub-scale if $CA \geq 0.60$. Two researchers interpreted the results independently. Corrected item-total correlations were used to assess homogeneity of scales; items were deleted when not fitting any construct. The inter-scale correlations between factors were used to check whether the constructs were distinct from each other. A value of 0.70 or less was considered satisfactory for supporting the construct structure.

Construct validity

Validity of ICE-Q constructs was addressed by testing theories. Variables found to influence expertise were profession, alliance context, and experience. Different professions were expected to have different ICE-Q scores, because balance in the biopsychosocial paradigm as well as demands varies by profession (Hall, 2008). For instance, GPs are more generalistic, due to the broader scope of their profession. The literature does not provide clues however either on the other areas of expertise, or on how other professions fit in this theory. Regarding alliances, working in a team is expected to produce higher scores for generalism as well (Ferrer, Hambidge, & Maly, 2005). Finally, we hypothesized that professionals with less experience are more likely to adopt integrated care expertise, because they know more about multimorbidity and are inclined to change (Southern, Bellin, & Arnsten, 2011).

To test whether ICE-Q construct scores (continuous) detected the influence of

profession (categorical variable) on integrated care expertise one-way analysis of variance (ANOVA) analyses were conducted, in addition to Tukey's post hoc test when significant differences were identified between professions. To test whether ICE-Q construct scores could detect the dependency of the alliance context (dichotomous) on integrated care expertise, we conducted unpaired t-tests. For the ability of the ICE-Q to test the association between integrated care expertise and years of experience (continuous), Pearson correlation coefficients were calculated for each sub-scale.

Item-response theory (informativeness)

Within an item-response theory (IRT) framework (Van de Linden, & Hambleton, 1996), graded response models were used to obtain item information curves: a visualization of the informativeness of items within each construct (one-dimensional latent variables) – that is, the ability of each item to discriminate respondents who vary on its latent trait.

RESULTS

Phase I: Construction of the questionnaire

None of the questionnaires found in the literature could be used literally. However, several questionnaires were used as references when drafting items: two for “generalism” (Akhtar- Danesh et al., 2010; Bonomi, Wagner, Glasgow, & Von-Korff, 2002), one for “coaching” (Bonomi et al., 2002), and two for “population health orientation” (Akhtar-Danesh et al., 2010; Gauld, Bloomfield, Kiro, Lavis, & Ross, 2006).

Most of the items were case-based, and presented realistic situations concerning accumulations of social and health problems (familiar situations within the context of deprived neighbourhoods). Other items presented general questions about attitude and behaviour in day-to-day practice. All 31 items were constructed as 5-point Likert scales, since expertise was assumed to have a fixed position on the underlying latent continuum (Dijkstra, 1991). Higher scores reflect higher expertise for integrated care.

Phase II: Expert consultation

The experts considered all items as fitting the areas of expertise closely after minor revisions regarding familiarity of cases for all of the potential participants' professions. A few additional items with regard to the concept of generalism were drafted, as experts suggested items may have been missed in the non-medical contextual factors. This resulted in a 42-item questionnaire.

Phase III: Field consultation

Consulted professionals indicated that several items were repetitive, and some stated that other items did not concern their day-to-day practice. In the latter category were items on diagnosing, which was beyond the responsibility of some professionals. These items were either deleted (if repetitive) or rephrased and re-tested. Professionals also stressed the difference between their attitude and behaviour towards colleagues within or outside their team. Sub-items were drafted for both situations. The third phase resulted in the first complete draft of the ICE-Q, with 34 items.

Phase IV: Pilot and statistical analysis

A total of 294 professionals started (47.7%), and 206 filled out all items of the questionnaire (33.4%). Health- and social-care organizations were involved and encouraged participation. The majority worked within a multidisciplinary alliance (65.3%) and is confronted regularly with complex cases (66.2%). Respondents represented various professions (Table 1).

Item validity

Neither of the items showed insufficient discriminatory power (maximum 91.1% in a single category), nor were redundant (maximum inter-item correlation CA was 0.74). Analysis of open text comments in the questionnaire and the focus group with professionals and policymakers indicated that reliability of two items was possibly doubtful.

The first item concerned the legal objections to share patients' information with colleagues, which many respondents mentioned as having influenced their

response. The item therefore did not measure professionals' expertise. Because legal aspects actually do apply to this situation, we chose to remove the item.

The second item concerned discussing topics with patients beyond their professional scope. Experts indicated that professionals would do so in principle, and answer accordingly, although they compromise on this professional duty in practice due to contextual factors (e.g., time). The responses did not go beyond social desirability however, which was also reflected in the low discriminatory power. The item was deleted.

Table 1. Respondent characteristics. Self-reported, except for profession (categorized by experts). Data represent the number of respondents in each category (n) and the percentage (in parentheses), except for "experience" (mean (\pm standard deviation)).

Number of professionals invited	616
Started the questionnaire (dropout)	294
Filled out completely	206
In multidisciplinary alliance (n = 288)	188 (65.3%)
Complex cases (n = 207)	
– (Almost) never/usually not	21 (10.1%)
– Occasionally	49 (23.7%)
– Usually/(almost) always	137 (66.2%)
Profession in primary care (n = 206)	
– Medical doctor	47 (22.8%)
– Social worker	51 (24.8%)
– Physical and other therapists	33 (16.0%)
– Nurse	50 (24.3%)
– Other	25 (14.1%)
Years of experience in profession (n = 206)	15.4 (11.2)

Internal consistency and FA

The remaining 32 items showed high internal consistency (CA = 0.80). The initial areas of expertise were confirmed mostly. Internal consistency of coaching (five items, CA = 0.66) and population health orientation (eight items, CA = 0.78) were satisfactory. Only the construct of generalism (seven items, CA = 0.44) was not satisfactory at that point.

FA confirmed the initial areas of expertise and distinguished sub-aspects, as had been reckoned by the experts in Phase II. The first exploratory FA (principal components extraction, eigenvalue >1, no rotation) revealed 11 components, ex-

Table 2. Results of the second FA

	Factor loadings on scale	Internal consistency reliability (CA ¹)	Corrected item-total correlation
Holistic attitude		0.61	
1. Ask colleagues for (medical) information about shared patients.	0.62		0.39
2. Provide colleagues with (medical) information about shared patients.	0.74		0.38
3. Adapt care for shared patients to colleagues' treatment plans.	0.71		0.50
Consideration of social context		0.77	
4. Consideration of income, education, and social status.	0.64		0.52
5. Consideration of social structures (family, friends, neighbors, etc.).	0.53		0.50
6. Consideration of employment situation.	0.74		0.65
7. Consideration of health status of the family.	0.50		0.36
8. Consideration of lifestyle and coping behavior.	0.77		0.58
9. Importance of social context.	0.70		0.60
Coaching		0.66	
10. Ask patients what role they can play in their own health/treatment.	0.62		0.55
11. Ask patients if they can involve social contacts in their treatment.	0.79		0.61
12. Ask patients if they want support to improve their self-management.	0.73		0.56
13. Provide support to patients to improve their self-management.	0.42		0.26
14. Refer patients for support to improve their self-management.	0.45		0.14
Prevention		0.48	
15. Responsible for addressing issues unsolicited in consultations and providing information about applicable local facilities.	0.74		0.35
16. Ask patients whether they want information on local facilities.	0.70		0.31
17. Responsible for searching and approaching risk groups preventively. ²	0.39		0.38
18. Search records and approach risk groups preventively. ²	0.41		0.26
19. Responsible for searching records and sharing information about risk groups with colleagues for preventive purposes.	0.41		0.22
Valuing local health knowledge		0.81	
20. Important to know about local sociodemographics.	0.80		0.71
21. Important to know about local social work issues.	0.71		0.68
22. Important to know about local medical issues.	0.70		0.59
Valuing knowledge on local facilities		0.67	
24. Important to know about local professionals.	0.63		0.50
25. Important to know about local social and medical organizations.	0.75		0.66
26. Responsible for knowing about local facilities.	0.44		0.34
26. Inform patients about local facilities on demand.	0.61		0.44

¹ CA = Cronbach's alpha,² These items loaded on factor5 as well and were assigned by consensus

plaining 69% of the variance. Three researchers (MA, JB, and TP) interpreted the output independently. Six meaningful factors were identified and three items were excluded. The second FA (principal components extraction, varimax rotation) on the remaining variables was therefore restricted to maximum six factors. They explained 51% of the variance. Three variables loaded low, and were removed. The output of the other 26 variables is shown in Table 2, suppressing loadings ≤ 0.39 . Two items (17 and 18) loaded sufficiently on both “prevention” and “valuing local health knowledge”. These results indicate interrelatedness of factors. These items were assigned based on the researchers’ interpretations and should possibly be considered later for removal.

Internal consistency of the six constructs ranged from 0.61 to 0.81, except prevention (CA = 0.48). Corrected item-total scale correlations were high, apart from four items (13, 14, 18, and 19). The last two items were part of the construct that itself showed low internal consistency. All inter-scale correlations ranged from 0.01 to 0.34 (Table 3), which considerably exceed the threshold. This indicates that each factor is a separate entity. The six meaningful constructs were interpreted and labelled (Box 2).

Table 3. Inter-scale correlations

	Holistic attitude	Social context	Coaching	Pre-ventive action	Valuing local health knowledge	Valuing knowledge on local facilities
Holistic attitude	1	0.21	0.28	0.20	0.10	0.16*
Social context		1	0.34	<0.01*	0.28	0.16*
Coaching			1	0.18*	-0.03	0.20
Preventive action				1	0.18	0.23
Valuing local health knowledge					1	0.24
Valuing knowledge on local facilities						1

Bold = $P < 0.01$, * = $p < 0.05$

Construct validity

One-way ANOVA confirmed that the ICE-Q could detect influences of profession on each of the sub scales: coaching, prevention, valuing knowledge on local facilities (all $p < 0.001$), social context ($p = 0.004$), holistic attitude ($p = 0.072$), and valuing local health knowledge ($p = 0.083$). Tukey's post hoc tests indicated however that neither profession scored consistently higher.

ICE-Q scores could detect the positive effect of working in multidisciplinary teams on all sub-scales as well, although the differences were small and only significant for social context ($t = 1.81$, $p = 0.072$), prevention ($t = 1.90$, $p = 0.059$), and valuing local health knowledge ($t = 1.80$, $p = 0.073$).

The ICE-Q could not detect the theoretical positive influence of years of experience on integrated expertise, as correlation coefficients with all constructs were between -0.30 and 0.30 , and mostly not significant.

Box 2. Description of the identified (sub)aspects of integrated care expertise.

*Generalism***1. Holistic attitude towards the patient.**

A person-focused approach, recognizing and taking into account that a particular problem (for which the patient is visiting a professional) interrelates with the patient's other medical issues and treatments. Though not necessarily suggesting that a single professional will deal with all of them.

2. Consideration of the patient's social context.

Health is not an independent concept related only to physical conditions. The rich contextual web of socioeconomic circumstances should be considered.

Coaching

3. Coaching towards self-management.

Support patients in their involvement in their care process by empowering them with knowledge and skills in accordance with their capacities. Coaching opposes the traditional paternalistic professional-patient relationship.

Population health orientation

4. Preventive action.

Approach to maintain or improve the health of the population as a whole. Concerns both talking about prevention during consultations, actively approaching individuals in the neighborhood and providing information and opportunities to avert risks. Implies responsibility for the health of all neighborhood residents.

5. Valuing knowledge on local (social) determinants of health.

Phase that precedes implementation of preventive action, referring to the attitude of professionals to know about the determinants of health (including the social determinants) in the neighborhood and their willingness act accordingly.

6. Valuing knowledge on local facilities.

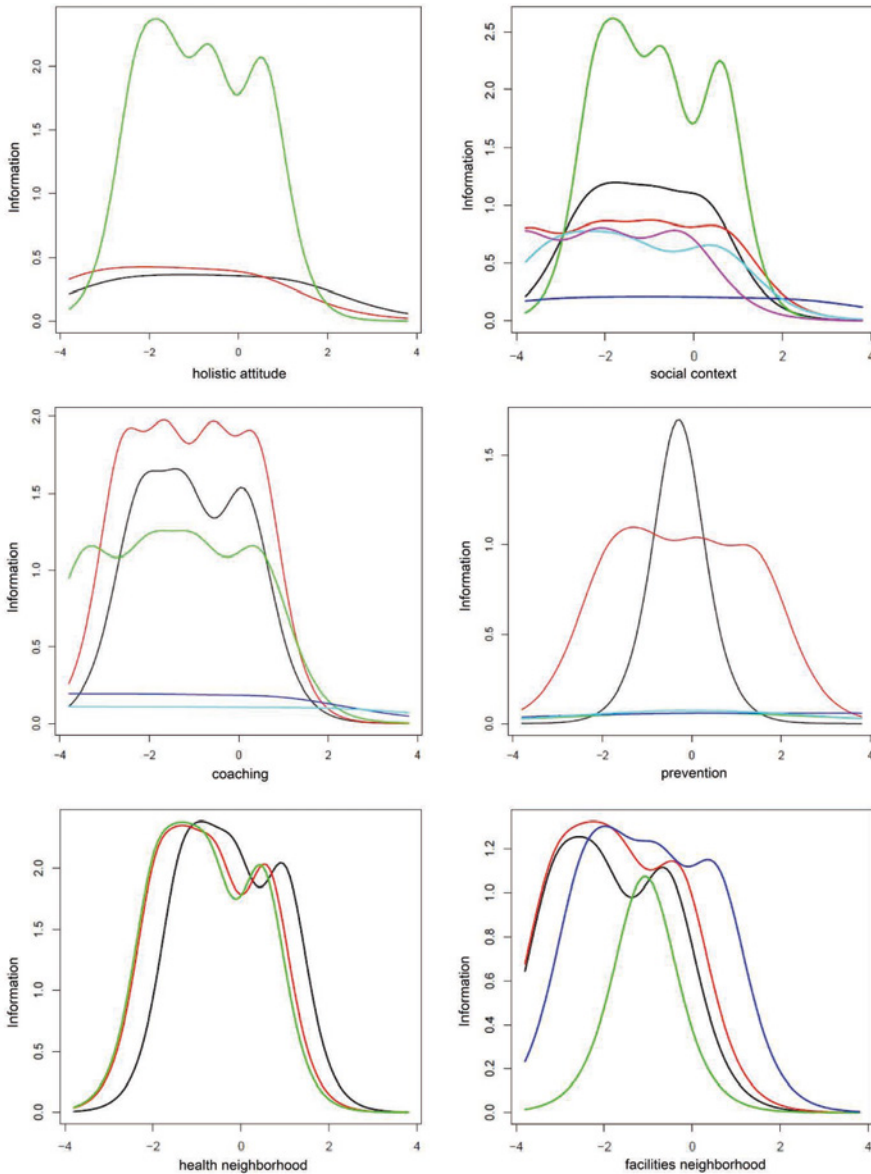
Phase that precedes implementation of preventive action, referring to knowledge about which facilities and/or programs are available in the neighborhood.

Item-response theory (informativeness)

The item information curves (Figure 2) indicate that items within constructs are unequally informative, although most items are informative. The x-axis represents the possible scores of items on the latent trait scale; the y-axis shows the ability of each item to discriminate respondents with different scores on that latent trait. Especially holistic attitude and prevention turn out to have only few items

with high informativeness. Still, internal consistency was sufficient. Adjustment of less-informative items could therefore improve constructs.

Figure 2. Item information curves for each of the six latent traits. The x-axis represents the possible scores of an item, the y-axis how effectively this item-score discriminates between scores of the latent trait (informativeness)



DISCUSSION

This article aimed to describe the first attempt to develop and validate an instrument for measuring integrated care expertise in four phases. Initially, three areas of expertise were identified. During the validation process these were confirmed, and developed further. This resulted in a 26- item questionnaire (see Appendix), covering six (sub-)areas of expertise.

Given its novelty, the ICE-Q developmental process was inherently iterative, which was a limitation of the validations' methodology. This raises concerns on the factor structure identified. Replication studies should be performed to show stability of the factors. On the other hand, the iterative process was helpful in understanding the concept. Furthermore, research needs to include non-deprived neighbourhoods too, because accumulation of health problems, which integrated care expertise responds to, is not restricted to deprived areas only. Variation in Dutch care practice and health outcomes is low, but other countries may need to take this into account.

Even so, a comparison to other measures (criterion validity) could not be made due to the lack of similar instruments. As this field is still in its infancy, hypotheses for assessing construct validity were scarce as well. It is simply unclear how areas of expertise compare to other measures, because none of them has been approached quantitatively before. An educated guess would be, for example, that higher ICE-Q scores correlate with a smaller number of professionals being involved in the care process of patients suffering from multimorbidity. Such hypothesis should be attended to in the future.

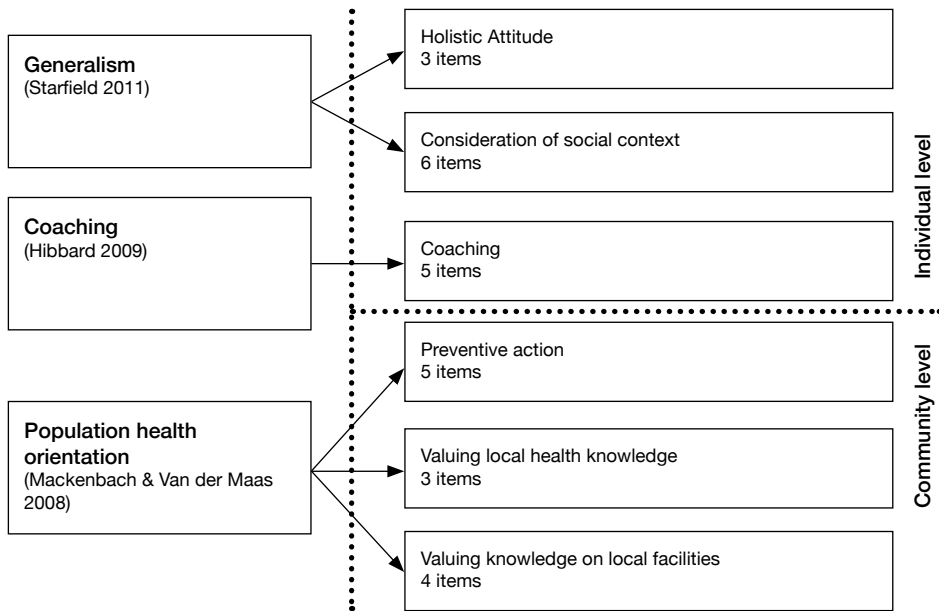
The case-based items were deemed to gather the targeted information better when they were tailored to everyday situations within the specific domains; however, a single version was preferred for validation purposes. The issue of domain versions should be studied in more detail when applying the ICE-Q in practice.

The initial conceptual overview has not been refuted, but rather elaborated upon, by refining integrated care expertise into six dimensions (Figure 3), which we interpret as covering both the individual level (1–3) and the community level (4–6). The authors consider the resulting questionnaire to be a preliminary instrument that should be developed further, along with understandings of in-

egrated care expertise, which equips professionals to better combat the current burden of disease.

Though six (sub-)areas of expertise were identified, their loadings indicated interrelatedness. This supports the WHO's notion of good stewardship: expertise as an indivisible capacity. The authors therefore wish to assign a sum score to the overall latent variable of integrated care expertise, or good stewardship. However, there is no consensus on the importance (weight) of each area of expertise. We recommend using the sub-scales separately. Further research is needed to develop a sum score.

Figure 3. Development of the conceptual understanding of integrated care expertise.



Concluding comments

The goal of this study was to develop and validate an instrument for measuring professionals' integrated care expertise. As such this study paves the way for the (quantitative) assessment of professional expertise and additionally provides insights into its understanding. By starting to quantify subareas of expertise, researchers will be able to study the role of integrated care expertise. The authors therefore hope that other studies will take up the challenge to continue the efforts described in this article.

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Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the writing and content of this article.

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SUPPLEMENTAL FILES

Supplemental file 1 – Resulting ICE-Q items in Dutch, structured retrospectively.

Vragenlijst geïntegreerde zorg expertise in zorg en welzijn (ICE-Q)

I. Holistische benadering

1. Wanneer u patiënten voor het eerst ontmoet en deze patiënten hebben ook contact met (een) andere professional(s), en u ontving niet vooraf informatie, zou u daar dan (met toestemming van de patiënten zelf) naar informeren bij andere professional(s)?
(5 stappen van “vrijwel nooit” naar “vrijwel altijd”)
2. Wanneer u patiënten adviseert naar een andere professional te gaan / besluit tot doorverwijzing, geeft u dan informatie aan de andere professional?
(5 stappen van “vrijwel nooit” naar “vrijwel altijd”)
3. Wanneer patiënten tegelijkertijd door twee of meer professionals worden behandeld, zorgt u er dan voor dat uw eigen werkzaamheden voor patiënten passend zijn bij de werkzaamheden van de andere professional(s)?
(5 stappen van “vrijwel nooit” naar “vrijwel altijd”)

II. Betrekken sociale context

4. Hoe vaak heeft u in de afgelopen 3 maanden bij het zien van patiënten bewust de invloed van inkomens, opleiding en sociale status op diens leven/gezondheid betrokken in uw oordeel, afwegingen of plan van aanpak?
(5 stappen van “vrijwel nooit” naar “vrijwel altijd”)
5. Hoe vaak heeft u in de afgelopen 3 maanden bij het zien van patiënten bewust de invloed van de sociale omgeving (familie, burens, vrienden, etc.) op diens leven/gezondheid betrokken in uw oordeel, afwegingen of plan van aanpak?
(5 stappen van “vrijwel nooit” naar “vrijwel altijd”)
6. Hoe vaak heeft u in de afgelopen 3 maanden bij het zien van patiënten bewust de invloed van werk en werkomstandigheden op diens leven/gezondheid betrokken in uw oordeel, afwegingen of plan van aanpak?
(5 stappen van “vrijwel nooit” naar “vrijwel altijd”)
7. Hoe vaak heeft u in de afgelopen 3 maanden bij het zien van patiënten bewust de invloed van het voorkomen van bepaalde ziektes in de familie op diens leven/gezondheid betrokken in uw oordeel, afwegingen of plan van aanpak?
(5 stappen van “vrijwel nooit” naar “vrijwel altijd”)
8. Hoe vaak heeft u in de afgelopen 3 maanden bij het zien van patiënten bewust de invloed van persoonlijke leefstijl en coping gedrag op diens leven/gezondheid betrokken in uw oordeel, afwegingen of plan van aanpak?
(5 stappen van “vrijwel nooit” naar “vrijwel altijd”)
9. In hoeverre vindt u het belangrijk om bij uw oordeel, afwegingen of plan van aanpak, rekening te houden met dergelijke invloeden?
(5 stappen van “niet belangrijk” naar “belangrijk”)

III. Coaching

Denkt u bij het beantwoorden van deze vragen aan uw werkzaamheden van de afgelopen 3 maanden.

10. Uitvragen wat patiënten wel en wat ze niet zelf kunnen doen voor hun herstel/gezondheid, doe ik ...
(5 stappen van “vrijwel nooit” naar “vrijwel altijd”)

11. Uitvragen of patiënten zelf in staat zijn hun sociale omgeving (familie, burens, vrienden, etc.) in te schakelen voor hun herstel/gezondheid, doe ik ...
(5 stappen van "vrijwel nooit" naar "vrijwel altijd")
12. Uitvragen of patiënten behoefte hebben aan ondersteuning om meer zelf te kunnen doen voor hun herstel/gezondheid, doe ik ...
(5 stappen van "vrijwel nooit" naar "vrijwel altijd")
13. Zelf patiënten deze ondersteuning geven (bijvoorbeeld door te motiveren tot gedragsverandering, door vaardigheden bij te brengen, door zelfvertrouwen te vergroten, etc.) doe ik ...
(5 stappen van "vrijwel nooit" naar "vrijwel altijd")
14. Voor deze ondersteuning patiënten doorverwijzen naar andere professionals, doe ik ...
(5 stappen van "vrijwel nooit" naar "vrijwel altijd")

IV. Preventie

15. Professional A voelt zich er ook verantwoordelijk voor het rookgedrag en/of overgewicht en/of schulden van haar patiënten ter sprake te brengen tijdens het spreekuur en haar patiënten over deze voorzieningen in de wijk te informeren, zelfs als de cliënt daar niet uit zichzelf om gevraagd heeft. Net als A voel ik mij hier verantwoordelijk voor.
(antwoordmogelijkheden "oneens" of "eens")
16. Bij patiënten ongevraagd rookgedrag, overgewicht en/of schulden ter sprake brengen om te vragen of patiënten informatie over dergelijke voorzieningen willen krijgen, doe ik zelf...
(5 stappen van "vrijwel nooit" naar "vrijwel altijd")
17. Professional B werkt in dezelfde wijk als professional A. Hij gaat in zijn patiëntenbestand na welke patiënten tot de groep thuiswonende 80+ ers behoren, en voelt zich er verantwoordelijk voor deze patiënten actief te benaderen om ze op zijn spreekuur te vragen. Hij wil op die manier nagaan of deze patiënten (of hun mantelzorgers) extra ondersteuning kunnen gebruiken, of dat alles nog goed gaat. Net als B voel ik mij hier ook verantwoordelijk voor.
(antwoordmogelijkheden "oneens" of "eens")
18. Zelf patiënten uit mijn patiëntenbestand zoeken en benaderen om na te gaan of ze extra ondersteuning nodig hebben, doe ik...
(5 stappen van "vrijwel nooit" naar "vrijwel altijd")
19. Professional C werkt in een gezondheidscentrum. Andere professionals uit het centrum, zijn bezig om in kaart te brengen hoeveel probleemjongeren er in de wijk zijn en deze doelgroep te benaderen om hen te informeren over een interventie. Deze professionals vragen C in zijn patiëntenbestand na te gaan welke patiënten tot de doelgroep probleemjongeren behoren. C voelt zich er verantwoordelijk voor zijn medewerking te verlenen aan zijn collega's, opdat zij deze doelgroep actief kunnen benaderen. Net als C voel ik mij hier ook verantwoordelijk voor.
(antwoordmogelijkheden "oneens" of "eens")

V. Kennis van gezondheid(determinanten) in het werkgebied

20. Vindt u het voor uw werk belangrijk om op de hoogte te zijn van de sociaaldemografische samenstelling van uw werkgebied (wijk/stad), dat wil zeggen van het aantal 65+ ers, aantal werkzoekenden, aantal alleenstaanden, etc.?
(5 stappen van "niet belangrijk" naar "belangrijk")
21. Vindt u het voor uw werk belangrijk om op de hoogte te zijn van de meest voorkomende sociaal-maatschappelijke problematiek in uw werkgebied, bijvoorbeeld armoede, criminaliteit, lage schoolprestaties, etc.?
(5 stappen van "niet belangrijk" naar "belangrijk")
22. Vindt u het voor uw werk belangrijk om op de hoogte te zijn van de meest voorkomende medische problematiek in uw werkgebied, bijvoorbeeld COPD, diabetes, depressie/angst, etc.?
(5 stappen van "niet belangrijk" naar "belangrijk")

VI. Kennis van (zorg)verleners/faciliteiten in het werkgebied

23. Vindt u het voor uw werk belangrijk om op de hoogte te zijn wie er als professionals werkzaam zijn in uw werkgebied?
(5 stappen van "niet belangrijk" naar "belangrijk")
24. Vindt u het voor uw werk belangrijk om op de hoogte te zijn welke vrijwillige welzijn- en zorgorganisaties er zijn in uw werkgebied?
(5 stappen van "niet belangrijk" naar "belangrijk")
25. Professional D werkt in een achterstandswijk. Veel van de cliënten uit haar praktijk hebben een ongezonde leefstijl en leven in armoede. Er is meer dan in andere wijken sprake van overgewicht. Ook is het aantal rokende bewoners hoger dan gemiddeld. D voelt zich er verantwoordelijk voor op de hoogte te zijn van voorzieningen in de wijk (zoals groepstherapie, telefonische hulpdienst e.d.) gericht op ondersteuning bij het stoppen met roken, het stimuleren van meer lichaamsbeweging, hulp bij schulden, etc. Net als D voel ik mij hier verantwoordelijk voor.
(antwoordmogelijkheden "oneens" of "eens")
26. Patiënten die om informatie vragen op de hoogte brengen van de voorzieningen in de wijk doe ik zelf...
(5 stappen van "vrijwel nooit" naar "vrijwel altijd")

Supplemental file 2 – Outline of the ICE-Q in English

Questionnaire measuring integrated care expertise among health and social care professionals (ICE-Q)

I. Holistic attitude

1. Ask colleagues for (medical) information about shared patients.
2. Provide colleagues with (medical) information about shared patients.
3. Adapt care for shared patients to colleagues' treatment plans.

II. Consideration of social context

4. Consideration of income, education, and social status.
5. Consideration of social structures (family, friends, neighbors, etc).
6. Consideration of employment situation.
7. Consideration of health status of the family.
8. Consideration of lifestyle and coping behavior.
9. Importance of social context.

III. Coaching

10. Ask patients what role they can play in their own health/treatment.
11. Ask patients if they can involve social contacts in their treatment.
12. Ask patients if they want support to improve their self-management.
13. Provide support to patients to improve their self-management.
14. Refer patients for support to improve their self-management.

IV. Prevention

15. Responsible for addressing issues unsolicited in consultations and providing information about applicable local facilities
16. Ask patients whether they want information about local facilities.
17. Responsible for searching records and approaching risk groups preventively.
18. Search records and approach risk groups preventively.
19. Responsible for searching records and sharing information about risk groups with colleagues for preventive purposes.

V. Valuing knowledge on local (social) determinants of health

20. Important to know about the local socio-demographics.
21. Important to know about local social work issues.
22. Important to know about local medical issues.

VI. Valuing knowledge on local healthcare and other facilities

23. Important to know about local professionals.
24. Important to know about local social and medical organizations.
25. Responsible for knowing about the local facilities.
26. Inform patients about local facilities on demand.