EMPIRICAL STUDIES

Professional governance in Finnish nursing – measured by the Index of Professional Nursing Governance

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Abstract

\textbf{Aim:} To translate and validate the Index of Professional Nursing Governance (IPNG) 2.0 and assess the state of professional nursing governance in Finland.

\textbf{Background:} Raising and maintaining quality of care while retaining staff are common problems in healthcare globally. Professional governance is a modern way to tackle them, but a reliable instrument is needed to measure the state of nursing governance in Finland, and elsewhere.

\textbf{Methods:} The IPNG that was translated into Finnish by forward-backward translation, culturally adapted and pilot tested with 20 nurses. A sample of 419 nurses was utilised in a cross-sectional study to assess the state of professional governance in Finland 2018.

\textbf{Results:} Principal component analysis yielded six components with good Cronbach’s \(\alpha\) values. The results clearly indicate that the IPNG version developed and evaluated in this study has suitable psychometric properties for use in Finnish healthcare settings. The validated IPNG scores indicate that nursing governance in Finland is in the professional governance range. The staff have some input in the governance of Finnish healthcare organisations. However, this perception is strongest among the nurse leaders and experts; other groups do not perceive much change yet.

\textbf{Conclusion:} Participants, particularly nurse leaders in Finland, had self-reported impact in decision-making. The translated IPNG has acceptable internal consistency and can be used to assess healthcare organisations’ governance models in Finland and broader in Nordic countries and Europe.

\textbf{KEYWORDS}

cross-sectional survey, Index of Professional Nursing Governance, nurse, professional governance, questionnaire
INTRODUCTION

Nursing shortage is a frequently discussed issue in health care, as it poses major, ongoing problem all over the world. There are an estimated 7.3 million nurses and midwives in Europe, but this is too few to meet current and projected future needs (1). Thus, healthcare organisations around the world are trying to resolve nursing shortage, partly by attracting new workforces and partly by trying to retain existing nurses. The workforce turnover is high, nurses leaving causes productivity losses and inadequate staffing decreases care quality (2).

Thus, several high-profile initiatives to ensure safe nurse staffing and improve work environments have been developed and applied around the world, such as legislative regulation of nurse to patient ratios and the Magnet Hospital Accreditation Program. Such initiatives’ potential effectiveness has been confirmed by detection of strong positive relationships not only between structural empowerment and organisational commitment, but also between investments in nurses’ professional practice work environments and quality outcomes (3, 4).

In Europe, however, these evidence-based practices in work force planning have been rarely implemented to date. Findings from RN4CAST studies show that hospital quality, safety and staff retention problems are common in all European countries, and Finland is no exception (5). Previous studies have also shown that nursing personnel in Finland are likely to be dissatisfied with the nursing process and their ability to obtain feedback from their nurse leaders. They also reportedly regard their managers’ transformational leadership qualities as moderate and their nurse directors as distant (6, 5, 7).

BACKGROUND

The characteristics of the working environment predetermine working behaviours and when there are resources and opportunities in the work context, professionals feel power to perform the tasks. Professional governance (PG) is a way to actualise better work environments and structural empowerment (8, 9). PG has a history of 25 years in the healthcare industry and has been defined as multidimensional organisational characteristics that encompass the structure and processes through which professionals direct, control and regulate one another’s goal-oriented efforts (4). Multiple studies over the years have shown that PG can lead to empowered personnel and quality care (10, 11, 12).

Recognised elements of PG include control over personnel, access to information, influence over resources supporting practice, ability to participate in organisational decisions, control over practice and ability to set goals and resolve conflict (13). The main issue connected to the control over personnel element is who has control over professional work in a formal organisation and makes decisions concerning matters like recruitment, salaries, professional and career development, evaluation and disciplinary actions, and patient flows. Healthy, well-supported, educated and motivated staff improve patients’ care experience and outcomes, so adequate compensation (including sufficient salaries and flexible contracts) is a basic requirement to retain the nursing workforce (13, 14, 1).

The access to information element concerns who has access to information relevant to governance matters such as the organisation’s goals and objectives, strategic plans, budget, financial status and information supporting professional practice and development. In many organisations, governance is primarily controlled by management. The responsibility for managing professional practice should, however, be shared by nursing staff and leaders, and in order to empower staff, they should be engaged in identifying areas for improvement (14). In addition, evidence-based practice should be enabled by allocating sufficient time, research and access to evidence sources (1).

The resources supporting practice element of PG concerns responsibility for selecting, procuring and allocating resources, like nursing services, products used in nursing care and staffing levels that support professional practice. Effective service delivery requires appropriate processes to ensure that adequate staff will be available at the right time. Nurses must be able to conduct their work in ways that are successful, efficient, safe and timely (1). Lack of resources may clearly impair the provision of quality service and is a direct predictor of burnout (15).

The participation element refers to who creates and participates in governance activities on different levels. Successful professional governance structures have been linked to a positive nursing practice environment. An effective structure with true sharing of decision-making between management and nursing personnel will also contribute to optimal patient outcomes. Management must ensure that patient care is not disrupted as a result of personnel’s involvement in professional governance activities and that staff are paid for participation (16).

Control over practice in this context refers to who controls professional practice and makes decisions about daily patient care assignments, patient flows, nursing care delivery models and incorporation of evidence-based practice. Nurse managers and directors have important roles to play in the provision and maintenance of working conditions. Support for good unit-level practice enables nurses to meet or exceed professional standards and fulfil goals in patient care (3).

The goal setting and conflict resolution element refer to who sets goals and engages in conflict-resolving negotiation at various organisational levels. All organisations are
responsible for setting and implementing goals and policies in accordance with national expectations, local needs, and promotion of their staff's health, well-being and a good work-life balance (1). It is highly important for healthcare organisations to clearly convey their goals and empower nurses to embrace them (17).

To evaluate whether an organisation's governance is empowering and professional, it must be measured. Thus, various instruments to measure nurses’ participation in professional governance have been presented (9) and a new instrument is in development (18). The Index of Professional Nursing Governance (IPNG) was chosen for this study as it has been used in more than 250 international healthcare organisations during the last 20 years to evaluate implementation of their management models (12).

Hess (8) created the IPNG for measuring professional governance along a conceptual continuum from traditional, through shared to self-governance models. Since the original inception of the IPNG, some of the items’ language had become outdated, no longer conveying the original intent. In 2013, an international team of multigenerational nurses updated the language of a few items, creating the IPNG 2.0. Subsequent psychometrics have remained unchanged (11, 4). Hess has since continued to advance the questionnaire (19).

Finnish hospitals have recently started initiatives to establish more shared decision-making processes. Given the importance of positive work environments, a reliable instrument is needed to assess nurses’ work environment and provide indications of areas of governance that require attention. Currently, no such instrument in Finnish is available. Partly to assist these efforts and gauge progress, there is a need for an instrument that is adapted to Finnish culture and healthcare settings.

AIM

Aims of the study presented here were as follows:

1. to translate the Index of Professional Nursing Governance (IPNG) 2.0 into Finnish and validate it;
2. to assess the state of professional nursing governance in Finland.

METHODS

Modification of the Index Professional Nursing Governance for use in Finnish healthcare settings

The original IPNG 2.0

The IPNG measures the governance of hospital-based nurses, based on a model of governance derived from the literature, in six dimensions: personnel, information, resources, participation and practice (20). Those six dimensions are covered by 86 items. Respondents use a 5-point Likert scale to identify the group that dominates certain areas of governance stated in the items, ranging from ‘management/administration only’ (1p), through ‘equally shared by staff and management/administration’ (3p) to ‘staff only’ (5p). The points for each dimension, and overall governance, are then summed, analysed and used to place the organisation’s governance on the continuum from traditional to self-governance (Table 1) (9, 19).

The IPNG has previously been translated, from its original language, American English, into Arabic, British English, Chinese, French, German, Korean and Portuguese (12). Its psychometric properties have been tested several times. Andersson (10) reported that Cronbach α coefficients for internal consistency for the total scale of the IPNG and subscales ranged from 0.85 to 0.97, when used in two hospitals (one a Magnet® and the other a non-Magnet hospital) in the USA. Lamoureux et al(11) used the IPNG in Florida, USA, and reported very high reliability for each of the six subscale scores and the total score (Cronbach α values ≥0.94). Dechairo-Marino et al(14) applied it in their 2nd ANCC Magnet® survey in Southern California, USA, and reported high reliability, with Cronbach’s alpha coefficients of 0.97 for the whole scale and 0.88–0.94 for the subscales (n = 489).

Translation and modification of the IPNG for use in Finnish settings

Dr Hess gave permission to use and modify the IPNG for Finnish health care in spring 2016. The IPNG has not been...
previously translated into Finnish, and an instrument from another culture can only be used after stringent cultural adaptation (21). Thus, the IPNG was translated using back-translation method, because it is a well-known method to maintain equivalence between the original and translated versions (21).

In this process, it was first translated into Finnish by an independent professional translator, then translated back to English by another independent professional translator. Next, the two versions of the instrument were compared by all the authors, who have relevant expertise of instrument development (21). In this stage, the semantic and conceptual equivalence of the versions were evaluated, and linguistic aspects of cultural differences in nursing governance were discussed and reflected upon. It became clear that the design of the instrument had to be slightly modified in order for the items to be simpler in Finnish.

In the original IPNG, participants are asked to identify whether management or personnel dominate certain areas of governance (Table 1), but in the Finnish version, they are asked whether they agree with statements that the nursing personnel can undertake, or participate in, a range of governance-related activities (Table 2). Care was taken to ensure that each translated item retained as close as possible meaning to the item in the original version.

The finalised Finnish instrument was once again translated into English, and Dr Hess approved the back translation and changes made to the instrument in 2016. It was pilot tested in 2017, by asking 20 clinical experts from the study context to check the wording and find culture-common concepts.

Shared governance as a whole is not a common concept in Finland, so following the pilot test some items were slightly adjusted to make them culturally understandable. For example, the word council is not familiar in Finnish healthcare settings and it was changed by the workgroup. Short, simple sentences and active voice were used in efforts to ensure that the content and meaning in the translated version were the same as in the original (21).

The Finnish version comprises 86 items and the respondents answer using the following 5-point Likert scale (which differs from the original instrument's scale): 1 = totally disagree, 2 = partly disagree, 3 = do not agree or disagree, 4 = partly agree and 5 = totally agree. As in the original IPNG, the responses are summed to calculate an overall score ranging from 86 to 430.

### Validity and reliability

Principal component analysis with Varimax rotation was applied to assess the instrument’s construct validity. Considered components all had eigenvalues over 1.0, with items loading only on one component, and communality for every value (indicating the relation between the item and all other items) exceeding 0.4. (22) Kaiser–Meyer–Olkin (KMO) values between 0.8 and 1 were considered adequate, as values >0.6 indicate that there are sufficient items for each component (23). Bartlett’s sphericity was used to test the hypothesis that the correlation matrix significantly differed (at \( p < 0.5\% \)) from a corresponding matrix in which correlations between

| TABLE 2 | Examples of the changes made to the items and scaling in the translation process |
|---------|-----------------------------------------------------------------------------|
| Original IPNG | Finnish IPNG |
| **Title:** In your organisation, please circle the group that PARTICIPATES in the following activities | **Title:** In your organisation, please choose the option that best matches your opinion; Nursing personnel participates in |
| Participation in unit committees for clinical practice | Unit committees for clinical practice |
| 1 2 3 4 5 | 1 2 3 4 5 |
| Participation in unit committees for administrative matters, such as staffing, scheduling and budgeting | Unit committees for administrative matters, such as staffing, scheduling and budgeting |
| 1 2 3 4 5 | 1 2 3 4 5 |
| Participation in nursing departmental committees for clinical practice | Nursing departmental committees for clinical practice |
| 1 2 3 4 5 | 1 2 3 4 5 |
| **Scaling:** 1 = Management/administration only | **Scaling:** 1 = Totally disagree, |
| 2 = Primarily management/administration with some staff input | 2 = Partly disagree, |
| 3 = Equally shared by staff and management/administration | 3 = Do not agree or disagree, |
| 4 = Primarily staff with some management/administration input | 4 = Partly agree |
| 5 = Staff nurses only | 5 = Totally agree |
variables are all zero (24). The internal consistency of the whole scale and subscales was regarded as acceptable if Cronbach’s $\alpha \geq 0.70$ (23).

**Nurses’ perceptions of involvement in decision-making**

**Design, settings and subjects**

The modified and translated IPNG was applied in a cross-sectional, self-report survey of staff in units of five Finnish University Hospitals nominated by their Chief Nursing Officers. Cross-sectional studies are frequently used to assess prevailing characteristics of a population, and groups within populations, at a certain point in time. They cannot be used to determine causal relationships but can provide a useful springboard for further research. In such studies, data are often obtained using self-report surveys, as they provide a relatively quick, inexpensive and convenient approach for collecting information (25). Participants in this study were nurse managers and experts ($n = 92$), registered nurses ($n = 298$), and personnel with other nursing positions (practical nurses and nursing assistants, $n = 29$).

**Data collection**

The Chief Nursing Officers of the five hospitals included in the study were contacted in June 2017 through emails providing information about the study and its aims. Each of these officers nominated a unit in her/his hospital to participate in the study in accordance with their research practices. To maintain anonymity, a contact person from each study hospital was chosen to administer the IPNG questionnaires, which were sent by emails together with information about the study’s aims, contact details and a link to the questionnaire in February 2018. Reminders to complete the electronic questionnaires used to collect IPNG data were sent through the contact persons in each study hospital until mid-April 2018. The contact persons also reminded personnel about the questionnaire in staff meetings and via intranet.

**Sample size**

According to recommendations by Watson and Thompson, (26) at least 5–10 subjects were required per item of the instrument for rigorous principal component analysis (PCA). As the Finnish IPNG has 86 items, ideally the sample should have included at least 430 respondents. Altogether 420 questionnaires were available for the PCA, giving an item to respondent ratio of very nearly 5:1.

**Data analyses**

Participants’ general characteristics were categorised and analysed using frequencies and percentages (gender, age, degree, position, years in nursing and years in organisation). Differences between nurse’s characteristics and governance scores were assessed using the Pearson chi-square test and calculating P values. Data were analysed using IBM SPSS Statistics 25 for Windows, and $p < 0.05$ was regarded as statistically significant.

**Ethical aspects**

The research ethics committee of the Northern Savo Hospital District issued approval (no. 285/2016) for the study in April 2017. All of the hospitals included in the study were contacted in June 2017 to seek approval according to their protocols and final approvals were obtained, from all the hospitals, in December 2017. Participation in the survey was voluntary and anonymous. No identifiable information was collected from the participants to maintain confidentiality.

**RESULTS**

**Characteristics of respondents**

The respondents ($n = 419$) were nurses (23–54 years old) from five Finnish University Hospitals, working as RNs, nurse leaders, specialists or in other roles. Most (93%) were women and registered nurses (75%) and had been working as nurses over 10 years (70%), and in the same organisation for over 10 years (48%). Their characteristics are summarised in Table 3.

**Psychometric properties of the translated IPNG**

**Validity**

The wording and overall structure of the translated instrument were evaluated by a group of 20 expert nurses in 2017. They represented the main sample well (95% women, 22–45 years old, registered nurses with over 21 years of experience, working as specialised nurses or nurse managers in the same university hospital for over 9 years). Content validity, particularly the congruence
between words and their cultural meaning, was assessed and after reviewing suggestions of the expert nurses, some items were reformulated to enhance their comprehensibility. In accordance with the hypothesised subscales, the PCA was constrained to six principal components (PCs), which were labelled following names of the subscales in the original instrument (Table 4).

**Reliability**

Cronbach alpha coefficients for the six subscales and overall scale of the Finnish version of the IPNG were over 0.87 and 0.977, respectively (Table 6), indicating that it has high reliability in terms of internal consistency. In addition, the KMO value obtained was 0.94, indicating that there were sufficient items for each factor and the sphericity test indicated that the data set easily met Bartlett’s criterion for PCA ($p < 0.01$).

**Nurses’ perceptions of involvement in decision-making**

To define the governance style of the participants’ organisations, scores for the overall governance scale and each of the six subscales were calculated and compared with the ranges of the previously mentioned PG modes (Table 6). The overall score was 203.6, indicating that the nurses’ perceived their hospitals to be run largely by management/administration with some staff input (Table 4).

The subscale scores provide information of specific aspects of governance. Subscale scores ranged between 19.6 and 55.7, which is within the PG spectrum for all subscales except Personnel (see emboldened values in Table 6).

**TABLE 3** Characteristics of the nursing respondents ($n = 419$)

| Variable                      | $n$ | %   |
|-------------------------------|-----|-----|
| Gender ($n = 416$)            |     |     |
| Male                          | 26  | 6   |
| Female                        | 390 | 94  |
| Age ($n = 284$)               |     |     |
| Under 25                      | 66  | 23  |
| 25–34                         | 108 | 38  |
| 35–54                         | 110 | 39  |
| Degree ($n = 416$)            |     |     |
| RN                            | 313 | 75  |
| Higher degree                 | 68  | 16  |
| Othera                        | 35  | 9   |
| Position ($n = 418$)          |     |     |
| Nurse leaders and experts     | 92  | 22  |
| Nurses                        | 297 | 71  |
| Othera                        | 29  | 7   |
| Years in nursing ($n = 394$)  |     |     |
| Under 5                       | 45  | 11  |
| 5–10 years                    | 74  | 19  |
| Over 10                       | 275 | 70  |
| Years in organisation ($n = 385$) |     |     |
| Under 5                       | 117 | 30  |
| 5–10 years                    | 83  | 22  |
| Over 10                       | 185 | 48  |

*aPractical nurses and nursing assistants.*

**TABLE 4** Components (subscales of the original and Finnish IPNG), and their definitions.

| Component | Definition in original IPNG | Definition in Finnish version |
|-----------|-------------------------------|------------------------------|
| 1. Personnel | Who has control over professional work in a formal organisation? | Personnel’s control over personnel and structures |
| 2. Information | Who has access to information necessary for controlling practice and influencing the allocation of organisational resources? | Personnel’s access to information |
| 3. Practice | Who is empowered with formal authority by the organisation? | Personnel’s control over professional practice |
| 4. Participation | Who determines and participates in structures that provide a vehicle for making governance decisions in the organisation? | Personnel’s control over participation |
| 5. Goals | Who has the ability to promote, negotiate, and manage conflict and goals within the organisation? | Personnel’s ability to negotiate conflicts |
| 6. Resources | Who has influence over the resources that support professional work? | Personnel’s control over resources |
A third of the participants of both genders and all ages who worked bedside with a degree in nursing or other subject and had been in nursing over 5 years felt that the governance style in their organisation was traditional, with nurses having little or no impact in any decision-making (28%–44%). Half or more of nearly all the distinguished groups felt that the governance model was primarily management/administration-led with some staff input (49%–58%). However, substantial proportions (12%–30%), especially of nursing personnel with higher degrees working as nurse leaders or experts who had been in nursing <5 years, felt that the governance style was primarily staff-led with some management/administration input. The Pearson chi-square test detected a significant interaction (df 6; $\chi^2 = 23.78$; $p > 0.05$) between work position and the governance scores. Nurse leaders and experts were more likely to feel that the decision-making power in matters concerning nursing was delegated to nursing personnel and that administration only played a minor role (Table 7).

**DISCUSSION**

Psychometric properties of the translated IPNG

Results of the study indicate that the translated IPNG instrument has sufficient reliability and validity for use in Finnish healthcare settings. Validity is defined as an instrument’s ability to measure the attributes of construct (27). In this study, it was assessed by PCA, a statistical method commonly used during instrument development to analyse relationships among large numbers of variables. A component is a construct associated with a combination of test items. Ideally, all of the items should be associated with only one of the components, (28) as is the case in this study, so no items were deleted. In addition, the KMO value (0.94) and results of Bartlett’s test ($p < 0.1$) confirmed that the data set is suitable for PCA. The identified six subscale structure accounts for 53.3% of the total observed variance, which is acceptable (29).

Cronbach’s alpha coefficient is a frequently used statistic to assess internal consistency, and the most widely used by nurse researchers for this purpose (27). A clinically used instrument should have an alpha coefficient alpha of at least 0.90. The coefficients obtained for both the subscales and overall instrument in this study (>0.87 and 0.977, respectively) easily met this reliability criterion.

**Nurses’ perceptions of involvement in decision-making**

This study provided new information, as professional nursing governance has not been previously studied in Finland.

**TABLE 5** Summary of results of PCA and reliability tests of the Finnish version of the IPNG

| Component       | Number of Items | Loadings   | Cumulative variance explained | Cronbach’s $\alpha$ |
|-----------------|-----------------|------------|-------------------------------|---------------------|
| 1. Personnel    | 23              | 0.356−0.702| 34.1%                         | 0.932               |
| 2. Information  | 15              | 0.349−0.746| 40.3%                         | 0.934               |
| 3. Practice     | 20              | 0.309−0.713| 45.0%                         | 0.932               |
| 4. Participation| 12              | 0.434−0.712| 48.1%                         | 0.914               |
| 5. Goals        | 7               | 0.343−0.748| 50.9%                         | 0.892               |
| 6. Resources    | 9               | 0.350−0.734| 53.3%                         | 0.876               |
| Instrument      | 86              | 0.309−0.748| 53.3%                         | 0.977               |

**TABLE 6** Scores for the subscales and overall governance

| Subscale        | Number of items | Definition                               | Scale | Mean in this study | Score in this study | Range for Professional Governance |
|-----------------|-----------------|------------------------------------------|-------|-------------------|---------------------|-----------------------------------|
| 1. Personnel    | 23              | Control over personnel and structures    | 1−5   | 1.53              | 35.360              | 47–92                             |
| 2. Information  | 15              | Access to information                    | 1−5   | 2.34              | 35.198              | 31−60                             |
| 3. Practice     | 20              | Control over professional practice       | 1−5   | 2.78              | 55.708              | 41–80                             |
| 4. Participation| 12              | Control over participation               | 1−5   | 2.54              | 30.585              | 25–48                             |
| 5. Goals        | 7               | ability to negotiate conflicts           | 1−5   | 2.79              | 19.570              | 15–28                             |
| 6. Resources    | 9               | Control over resources                   | 1−5   | 2.65              | 23.888              | 19–36                             |
| Instrument      | 86              |                                          | 1−5   | 3.06              | 203.62              | 173–344                           |

*aThe subscale scores that fall into the professional governance range are bolded.*
or other northern countries. Earlier studies showed that nursing personnel in Finland regard managers’ transformational leadership qualities as moderate and their nurse directors as distant (5, 6, 7). The overall governance score in this study (203.6) places decision-making in the included hospitals within the PG spectrum (173–344) and roughly half or more of nearly all the included groups of nursing personnel felt that they had influence in nursing decisions.

The results indicate that nursing personnel have access to information, influence over resources supporting their practice, control over their practice and ability to both set goals and resolve conflicts. This is encouraging for Finnish health care as a whole, and specifically the included university hospitals, which are actively developing their management style while pursuing Magnet status (7).

However, in this study a third of the participants in all groups felt that the governance style is still traditional. This is not surprising because even when overall governance is good, some units or divisions may be more advanced than others, and managers and personnel may have different expectations (10, 11). The IPNG subscale scores can be used to identify the least developed areas and required actions, but the sample in this study was too small to allow more specific analysis.

Nursing personnel who had higher degrees and/or worked as nurse leaders or experts had stronger belief that PG was present in their organisations than the other groups, and a significant interaction was detected between work position and the governance scores. These findings are consistent with expectations, as nurse leaders and executives tend to report higher PG scores than other personnel, (10, 13) and requirements to establish PG, as nurse leaders and experts play crucial roles in transforming the work environment and need strong faith in such initiatives.

Scores obtained for the subscales Information, Participation, Practice, Goals and Resources are in the PG range, but not the score for the Personnel subscale. Participation, Information and Resources components of PG

### TABLE 7 Overall governance scores calculated from responses of indicated groups of nursing staff.

| Groups of nursing staff (n = 419) | Traditional governance | Primarily management/administration with some staff input | Primarily staff with some management/administration | Total | Pearson Chi-Square | p |
|---------------------------------|------------------------|---------------------------------------------------------|---------------------------------------------------|-------|-------------------|---|
| Gender (n = 416)                |                        |                                                         |                                                   |       |                   |   |
| Male                            | 8/31%                  | 14/53%                                                  | 4/16%                                             | 26/100% | 0.53              | 0.974 |
| Female                          | 125/32%                | 201/52%                                                 | 64/16%                                            | 390/100% |                   |   |
| Age (n = 284)                   |                        |                                                         |                                                   |       |                   |   |
| Under 25                        | 24/37%                 | 32/49%                                                  | 10/14%                                            | 66/100% | 1.2               | 0.878 |
| 25–34                           | 35/32%                 | 58/54%                                                  | 15/14%                                            | 108/100% |                   |   |
| 35–54                           | 35/32%                 | 55/50%                                                  | 20/18%                                            | 110/100% |                   |   |
| Degree (n = 416)                |                        |                                                         |                                                   |       |                   |   |
| RN                              | 106/34%                | 163/52%                                                 | 44/14%                                            | 313/100% | 11.616            | 0.200 |
| Higher                          | 12/18%                 | 38/56%                                                  | 18/26%                                            | 68/100% |                   |   |
| Othera                          | 14/40%                 | 17/49%                                                  | 4/11%                                             | 35/100% |                   |   |
| Position (n = 418)              |                        |                                                         |                                                   |       |                   |   |
| Nurse leaders and experts       | 16/18%                 | 48/52%                                                  | 28/30%                                            | 92/100% | 23.78             | 0.010 |
| Nurses                          | 104/35%                | 157/53%                                                 | 36/12%                                            | 297/100% |                   |   |
| Othera                          | 13/44%                 | 12/41%                                                  | 4/15%                                             | 29/100% |                   |   |
| Years in nursing (n = 394)      |                        |                                                         |                                                   |       |                   |   |
| Under 5                         | 9/ 20%                 | 25/56%                                                  | 11/24%                                            | 45/100% | 6.456             | 0.168 |
| 5–10 years                      | 21 / 28 %              | 43/58%                                                  | 10/14%                                            | 74/100% |                   |   |
| Over 10                         | 96/35%                 | 139/51%                                                 | 40/14%                                            | 275/100% |                   |   |
| Years in organization (n = 385) |                        |                                                         |                                                   |       |                   |   |
| Under 5                         | 35/30%                 | 61/52%                                                  | 21/18%                                            | 117/100% | 1.316             | 0.859 |
| 5–10 years                      | 28/34%                 | 42/51%                                                  | 13/15%                                            | 83/100% |                   |   |
| Over 10                         | 60/32%                 | 100/54%                                                 | 25/14%                                            | 185/100% |                   |   |

*aPractical nurses and nursing assistants.*
are easiest to establish according to previous studies, and their scores tend to reach PG levels before the overall scores (13, 14). Some of the organisations included in this study had been developing different kinds of empowering structures for up to 10 years, which could explain the relatively good results for the goal setting and controlling resources components.

It should be noted that although the importance of the Personnel subscale as a component of PG is easy to grasp, many organisations struggle to establish personnel-related aspects of PG. Decisions regarding matters such as budgeting, salaries, benefits, recruitment and evaluating personnel are generally controlled by managers, laws and unions, and it is difficult to empower personnel in this respect (13, 14).

**Limitations and future research**

Although the translated instrument showed good reliability, several implications for future research were identified. One of the aims of this study was to modify and test the Finnish version of the IPNG, and there is a need to re-examine its internal consistency and usability with a larger, more representative sample. This would also yield generalisable results and facilitate formulation of action plans from the obtained scores.

When translating an instrument, care should be taken to ensure that it measures the same content in each of the cultures. As no results obtained with previous translations of the IPNG have been reported, the consistency of the factor structure cannot be judged yet. Thus, more research is needed, including a test-retest procedure to corroborate the Finnish IPNG’s reliability.

The original IPNG is rather large (86 items), and a smaller version has been developed (IPNG 3.0). When an instrument is long, the results may be affected by participants becoming tired or bored. This probably explains at least some missing values in the data. The questions dealing with characteristics of the participants yielded most of the missing values (6%–32%). Most of the participants were women and 32% did not reveal their age. However, only 0.72% values were missing for specifically PG-related items of the instrument. As there was no imputation of missing values, care was taken to avoid misleading conclusions about the connection between age and the overall governance score. Further research is needed to assess the potential value of translating and applying the shorter version.

**CONCLUSION**

The results clearly indicate that the IPNG version developed and evaluated in this study has suitable psychometric properties for use in Finnish healthcare settings. The instrument appears to be reliable and simple to administer. There have been no previous analyses of PG in Nordic countries and modifying the questionnaire for application in Finnish contexts has enabled PG to be measured and compared internationally.

The overall score obtained in this study was 203.6, indicating that the staff have some input in the governance of Finnish healthcare organisations. However, this perception is strongest among the nurse leaders and experts; other groups do not perceive much change as yet. Thus, there is a clear need to boost progress towards empowerment through interventions tailored for specific organisations. Inter alia, as there is still little knowledge of PG in Nordic countries, various kinds of education programs to strengthen leadership skills, effective communication and overall knowledge of PG would be helpful. Increasing practice council time and accessibility, as well as staff involvement and developing digital environments to facilitate it, would precipitate the progress.

Establishment of PG is an ongoing process that requires strong effort and leadership from nurse leaders, but the resulting increase in personnel’s commitment and empowerment will be highly beneficial for their organisations. The IPNG can be used to gauge current PG, assess changes in governance, tailor interventions for improvement and ensure that all the personnel feel the changes.

**CONFLICT OF INTEREST**

The authors declare that there is no conflict of interest.

**AUTHOR CONTRIBUTIONS**

The authors confirm contribution to the paper as follows: study conception and design: Taina Kanninen, Arja Häggman-Laitila, Tarja Tervo-Heikkinen, Tarja Kvist; data collection: Taina Kanninen; analysis and interpretation of results: Taina Kanninen, Arja Häggman-Laitila, Tarja Tervo-Heikkinen, Robert Hess, Tarja Kvist; draft manuscript preparation: Taina Kanninen with input from all authors. All authors reviewed the results and approved the final version of the manuscript.

**ETHICAL APPROVAL**

The research ethics committee of the Northern Savo Hospital District issued approval (no. 285/2016) for the study in April 2017.

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**REFERENCES**

1. WHO, Regional office for Europe. Data and statistics. 2019. Available from http://www.euro.who.int/en/health-topics/Health-systems/nursing-and-midwifery/data-and-statistics Accessed 13 Sep 2020.
