The development and testing of the Person-centred Practice Inventory – Staff (PCPI-S)

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ABSTRACT

Objective: The aim of the study was to develop and test an instrument, underpinned by a recognised theoretical framework, that examines how staff perceive person-centred practice, using proven methods of instrument design and psychometric analysis.

Design: The study used a mixed method multiphase research design involving: two Delphi studies to agree definitions and items to measure the constructs aligned to the person-centred practice theoretical framework (phase 1); and a large scale quantitative cross sectional survey (phase 2).

Setting: Phase one was an international study involving representatives from 7 countries across Europe and Australia, with phase 2 conducted in one country across 5 organisations.

Participants: Two international panels of experts (n = 33) in person-centred practice took part in the Delphi study and a randomly selected sample of registered nurses (n=703, 23.8%) drawn from across a wide range of clinical settings completed the Person-centred Practice Inventory – Staff.

Main Outcome Measures: The main outcome is to establish a measure of staff perceptions of person-centred Practice.

Results: Broad consensus on definitions relating to 17 constructs drawn from a person-centred practice framework was achieved after 2 rounds; likewise with the generation of 108 items to measure the constructs; a final instrument comprising 59 items with proven psychometric properties was achieved.

Conclusions: The PCPI-S is psychometrically acceptable instrument validated by an international expert panel that maps specifically to a theoretical framework for person-centred practice and provides a generic measure of person-centredness.

INTRODUCTION

Person-centred Practice has become a central tenant of quality health care globally, yet currently there is a dearth of tools aimed at measuring the provision of person-centred practice among health care professionals across a range of settings [1]. The development of standardised tools facilitates the accumulation of internationally comparable data as well as providing a strong evidence-base. This paper presents the development and testing of a tool to measure person-centred practice that is informed by an established person-centred practice theoretical framework [2].

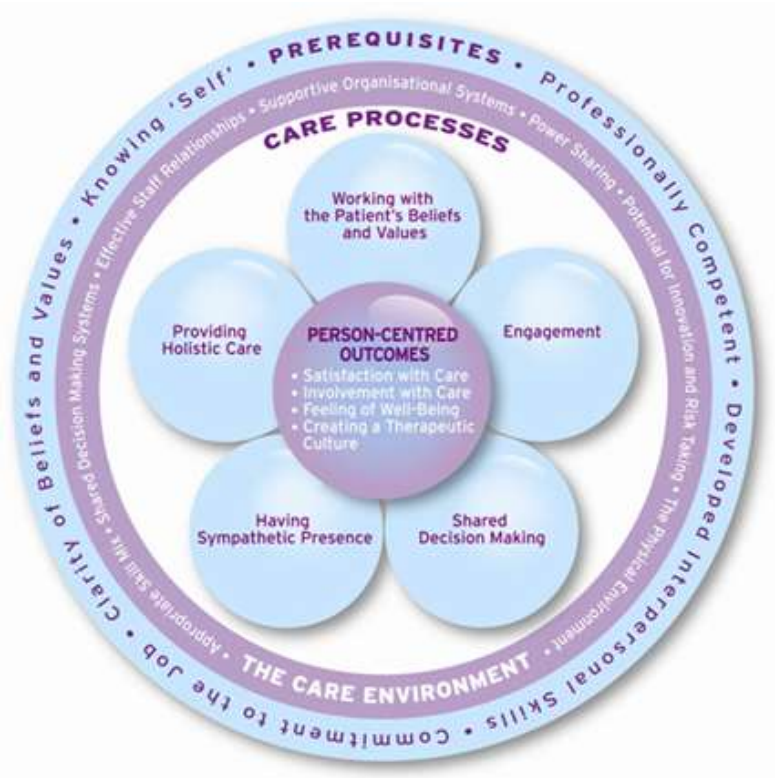
BACKGROUND

Person-centred practice has become a global phenomenon and underpins national and international healthcare policy [3]. The evolution of person-centred practice as a term continues with greater movement towards broad agreement on definitions, conceptual frameworks and as a consequence its subsequent measurement [1].

The Person-centred Practice Framework developed by McCormack and McCance [2] is an internationally recognised theoretical framework that assists teams to understand the dimensions of person-centredness and how these dimensions can be operationalised in practice. At its core it holds central the establishment of the therapeutic relationship between the health professional and the person (including families and care partners). It is underpinned by values of respect for the person, individual right to self-determination, mutual respect and understanding [2]. The framework has four concepts: prerequisites, the care environment; person-centred processes; and person-centred outcomes. The 4 concepts are set within a macro context of the healthcare setting. Each concept comprises constructs that help define it as presented in Figure 1. The proposition is that the attributes of staff must first be

considered, as a prerequisite to managing the care environment, in order to provide effective care through the person-centred processes. This ordering, ultimately leads to the achievement of the outcomes – the central component of the framework.

Figure 1. The Person-centred Practice Framework (McCormack and McCance 2010)



The framework has been described as a way of operationalising person-centredness in practice, recognising that at a level of principle, the idea of person-centredness is well understood, but translating that understanding into everyday practice remains the challenge. Within the framework there is an increasing recognition of the challenges associated with implementing person-centred practice for teams who are working within complex organisational systems [4-6]. McCormack et al. [7] suggest that contextual factors such as organisational culture, the learning environment and the care environment itself, pose the greatest challenge to person-centredness and the development of cultures that can sustain person-centred care. McCance et al [8] explored how the culture and context of acute care

settings impacted on the engagement of practitioners in a facilitated practice development programme. The findings highlighted the constant tussle experienced by staff between managing contexts, whilst trying to develop cultures that supported person-centredness in everyday practice. Similarly, Laird et al [10] reported that context and culture of care are important components that have influenced the development of person-centred practice in acute care settings.

The evaluation of person-centred outcomes is complex [11] and subtle, the pairing of appropriate evaluation frameworks and assessment tools is central to the production of an accurate evidence base. The Health Foundation [1] identified the existence of 176 quantitative and qualitative validated tools purported to measure person-centredness that include mostly proxy measures and patient focused outcomes. Edvardsson and Innes [12] recognised this point also and concluded that many assessment tools relating to person-centred practice failed to map on to theoretical frameworks. Harding and colleagues [13] acknowledged the necessity to produce a strong evidence base of the effectiveness of person-centred care and stated that the development of standardised measurement tool that maps to a recognised theoretical Person-centred framework is a significant step to achieve this.

METHODOLOGY

Aims and Objectives

The aim of the study was to develop and test an instrument (the Person-centred Practice Inventory – Staff (PCPI-S)), underpinned by a recognsied theoretical framework, that examines how staff perceive person-centred practice, using proven methods of instrument design and psychometric analysis. The specific objectives were to:

1) ensure the validity of the definitions pertaining to each of the constructs within the Person-centred Practice Framework

2) establish the validity of the items to measure each construct

3) establish the factor structure of the PCPI-S.

Research Design

A mixed methods multiphase design was used in the study based on a process of instrument development and reliability testing. Phase 1 addressed instrument development and included two integrated stages: stage 1- Generation and refinement of construct definitions and validity testing. Stage 2 – Generation and refinement of construct items and validity testing. Phase 2 examined the relationship of items to constructs, refinement and acceptance of the instrument through a cross sectional survey.

Phase 1: Development of the Instrument – Delphi Study

A Delphi study was undertaken with the aim of: 1) gaining agreement on the definitions for each of the elements with the Person-centred Practice Framework; and 2) gaining consensus on the items to be included within a new instrument that would align to the agreed definitions. Qualitative Delphi techniques, integrating Content Validity Index measures were used to gain consensus on the person-centred practice definitions and identify items to measure the definitions.

Stage 1 – Defining Constructs

To commence the process, the authors of the Person-centred Practice Framework [2] generated the definitions for each of the 17 constructs contained in the Framework. These were put forward for discussion and refinement in the Delphi study. A panel of 33

international experts was established to refine the definitions through an iterative three round Delphi study. Inclusion was defined as professionals who were recognised as an expert in the area of person-centred research and practice, which was determined by a history of publishing in peer-reviewed journals in the previous 5 years and proficient in spoken and written English. Participants included academics, health care practitioners and doctoral students drawn from International Person-centred Practice Centres and Practice Development Network Groups. Invitation letters were emailed to each panel member explaining the aims / objectives of the study and the process involved, with a web-link to phase one of the Delphi study.

Participants were invited to indicate their level of agreement with each definition on a 4-point Likert scale and to provide recommendations for change where there was established disagreement. Strict criteria for the acceptance of each definition were established. Ulschak [14] recommend 80% agreement among panel members. Green [15] suggests 70% of the sample score three or more on a 4-point Likert Scale with a median of 3.25 or higher. Accepted definitions were excluded for subsequent rounds. Recommendations were integrated into definitions included in the subsequent round of the Delphi. This iterative process continued until final acceptance of the definitions was achieved after 3 rounds. Only participants who completed all previous rounds of the Delphi were included in all subsequent rounds, therefore the sample size decreased with each iteration.

Stage 2 – Item Generation

Based on the agreed definitions, a panel of international experts (n=26) in person-centred practice and questionnaire development convened through international person-centred practice networks were provided with the agreed construct definitions and invited to suggest

items for inclusion in a pool for consideration in the PCPI-S. The expert panel were provided with details relating to the study aims and objectives and given guidelines to include both positively and negatively worded statements that would provide a comprehensive examination of the broadness of the 17 constructs being investigated. Items were pooled according to each construct and following screening by the research team, duplication of statements were removed, and an agreed pool of 108 items was generated by participants.

The panel of experts were invited to score the 108 items for their representativeness as a measure of each validated definition. Participants were instructed to rate their agreement with each statement according to their perceptions as to how well it measured the construct according to the definition provided. Agreement was scored on a 5-point Likert scale ranging from strongly disagree to strongly agree. Higher scores indicated higher levels of agreement that the statement represented the construct as defined in stage one of the process. Acceptable group consensus for each item being an effective measure of the construct was set at 75% and a mean score of > 4. Participants were instructed to provide suggestions as to how the item could be modified to provide a more acceptable statement for inclusion. Modifications to unaccepted statements were made between each round of distribution for further consideration. This process continued for 2 full iterations of analysis.

The final agreed set of items resulted in the PCPI-S as a 96 item instrument measured on a 5-point scale ranging from strongly disagrees to strongly agree. The 96 items represent the 17 constructs contained in the prerequisites; care environment and care process constructs of the Person-centred Practice Framework. Person-centred Practice Outcome measures (see Figure 1) were not included at this stage as the development of such measures is difficult [13] and merit further focused research. Higher scores indicate higher levels of agreement. The

relationship between items and constructs formed the basis for the measurement model to be tested in phase 2 of the study.

Phase 2 – Testing the Measurement Model of the Instrument

A quantitative cross sectional survey research design was used to generate sufficient data to adequately test the measurement model.

Sample

The PCPI-S was tested with a sample of nursing staff drawn from one country across 4 organisations representing 8 acute hospital settings reflecting a mix of rural/urban settings, and providing services to a population of 1.5 million people. A range of clinical settings were invited to participate in the study, which included: Adult Services; Children and Young People; Primary Care and Older People; Mental Health and Learning Disability. A gatekeeper in each organisation randomly distributed questionnaire packs across hospitals, directorates and clinical settings. All nurses in each clinical setting were selected based on the following inclusion criteria: (i) a Registered Nurse; (ii) working full time' (iii) have worked in the clinical setting for at least 6 months; and (iv) willing to participate.

A total of 2825 questionnaire packs were distributed via ward/department managers in each clinical setting. Participants were asked to complete the questionnaire and return it in the envelope provided for collection by the researcher. A response rate of 24.9% (n=703) was achieved (See table 1).

Table 1. Demographic Details of PCPI - Staff Respondent

Healthcare Setting		BANDING*		EXPERIENCE	
Setting 1	11.0%	Band 5	64.2%	<1 year	2.5%
Setting 2	38.5%	Band 6	20.1%	1 – 5 years	20.3%
Setting 3	5.7%	Band 7	14.5%	6 – 10 years	17.0%
Setting 4	44.7%	Band 8	1.2%	Over 10 years	60.1%

*Higher banding indicates more senior grade

Procedure

This sample was selected so as to obtain a good representation of views on person-centred practice for all nurses across the four participating organisations. Questionnaires were distributed to nurses with the consent of the ward managers who provided a list of the total population of nurses in the settings. The process of implied consent was made explicit in the Participant Information Sheet and sought whereby a completed questionnaire implies consent to participate. This ensured the confidentiality and anonymity of returned questionnaires. A deadline of two weeks was given for the return of questionnaires and a week of follow-up visits to retrieve questionnaires. Questionnaires collected were collated and categorised for data analysis by construct and clinical setting.

Statistical Analysis

Confirmatory factor analysis was used to examine the theoretical measurement model. Examination of the data indicates skewness and kurtosis on many of the items. Therefore the data were analysed using Maximum Likelihood Robust (MLR) as relevant with continuous and skewed data. An acceptance criteria of: (1) factor loadings of greater than 0.4; and (2) with no cross factor loadings were designated. Items were removed according to these criteria. The model was refined until acceptable. Acceptable fit statistics were set at Root

Mean Square Estimations of Approximation (RMSEA) of 0.06 or below; 90% RMSEA higher bracket below 0.08; and Confirmation Fit Indices (CFI) of 0.95 or higher [16].

RESULTS

Definition Generation

A total of 23 (69.7%) of the original 33 international experts responded at time 1. The findings of the Delphi study indicated an overall high level of agreement with the definitions. Eleven of the statements were agreed upon after round 1, where 80% of the sample agreed with the statement and the median was scored above 3.25. This median score indicates that more than half of the respondents strongly agreed with the definition. The remaining 6 definitions were modified in accordance with suggestions provided by the expert panel (professionally competent; being committed to the job; knowing self; effective staff relationships; clarity of beliefs and values; supportive organisational systems).

A response rate of the expert panel reduced to 21 (91.3%) of 23. A further two definitions (knowing self and supportive organisational systems) were accepted after round 2, with median scores of 4 and increased percentage agreement. The remaining four definitions (professionally competent; being committed to the job; effective staff relationships; clarity of beliefs and values) were modified in accordance with the comments provided by the expert panel. A total of 19 (90%) of the 21 experts responded at time 3. The remaining 4 definitions were accepted. The finalised mean, median and percentage of experts who agreed with the statement are presented in table 2.

Table 2: The construct definitions, median, mean and percentage agreements to definitions of the Person-centred Practice Framework

DEFINITIONS	Mean	Median	%
Professionally Competent: The knowledge, skills and attitudes of the practitioner to negotiate care options, and effectively provide holistic care.	3.44	3.5	94.5%
Developed Interpersonal Skills: The ability of the practitioner to communicate at a variety of levels with others, using effective verbal and non-verbal interactions that show personal concern for their situation and a commitment to finding mutual solutions.	3.64	4	95.5%
Being Committed to Job: Demonstrated commitment of individuals and team members to patients, families and communities through intentional engagement that focuses on providing holistic evidence-informed care	3.5	3.5	100%
Knowing Self: The way an individual makes sense of his/her knowing, being and becoming as a person-centred practitioner through reflection, self-awareness, and engagement with others.	3.62	4	95.2%
Clarity of Beliefs and Values: Awareness of the impact of beliefs and values on care provided by practitioners/ received by service users and the commitment to reconciling beliefs and values in ways that facilitate person-centredness.	3.5	4	89%
Skill Mix: Skill mix is most often considered from a nursing context and means the ratio of registered nurses (RNs) and non-registered nurses in a ward/unit nursing team. In a multidisciplinary context it is means the range of staff with the requisite knowledge and skills needed to provide a quality service.	3.45	4	90.9%
Shared Decision-making: Engagement that facilitates active participation in decision-making by all team members.	3.27	3.5	81.6%
Effective Staff Relationships: Interpersonal connections that are productive in the achievement of holistic person-centred care.	3.39	3.5	89%
Power Sharing: Non-dominant, non-hierarchical relationships that do not exploit individuals, but instead are concerned with achieving the best mutually agreed outcomes through agreed values, goals, wishes and desires.	3.41	4	90.1%

Potential for Innovation and Risk Taking: The exercising of professional accountability in decision-making that reflects a balance between the best available evidence, professional judgement, local information, and patient/family preferences.	3.36	3.5	86.4%
The Physical Environment: Healthcare environments that balance aesthetics with function by paying attention to design, dignity, privacy, sanctuary, choice/control, safety, and universal access with the intention of improving patient, family and staff operational performance and outcomes (adapted from HfH 2008).	3.5	4	95.5%
Supportive Organisational Systems: Organisational systems that promote, initiative, creativity, freedom and safety of persons, underpinned by a governance framework that emphasises culture, relationships, values, communication, professional autonomy, and accountability.	3.57	4	95.2%
Working with Patients Belief and Values: Having a clear picture of what the patient values about his/her life and how he/she makes sense of what is happening from their individual perspective, psychosocial context and social role.	3.55	4	90.9%
Shared Decision-making: The facilitation of involvement in decision-making by patients and others significant to them by considering values, experiences, concerns and future aspirations.	3.64	4	95.5%
Engagement: The connectedness of the practitioner with a patient and others significant to them, determined by knowledge of the person, clarity of beliefs and values, knowledge of self and professional expertise.	3.45	3.5	95.5%
Providing Holistic Care: The provision of treatment and care that pays attention to the whole person through the integration of physiological, psychological, sociocultural, developmental and spiritual dimensions of persons.	3.73	4	95.5%
Having Sympathetic Presence: An engagement that recognises the uniqueness and value of the individual, by appropriately responding to cues that maximise coping resources through the recognition of important agendas in their life.	3.36	3.5	86.4%

Table 3. Item retention after iteration of the development process of the PCPI-Staff

Constructs	**Items (Round 1)**	**Items (Round 2)**	**Items (Round 3)**
PREREQUISITES			
Professionally Competent	8	8	3
Developed Interpersonal Skills	5	5	4
Being Committed to the Job	7	7	5
Knowing Self	5	5	3
Clarity of Beliefs and Values	5	5	3
CARE ENVIRONMENT			
Skill-Mix	4	3	3
Shared Decision-making Systems	5	5	4
Effective Staff Relationships	7	5	3
Power Sharing	8	6	4
Potential for Innovation and Risk Taking	6	6	3
The Physical Environment	5	4	3
Supportive Organisational Systems	8	7	5
Working with Patients Belief and Values	7	7	4
CARE PROCESSES			
Shared Decision-making	5	5	3
Engagement	7	7	3
Having Sympathetic Presence	8	6	3
Providing holistic care	7	5	3
TOTAL ITEMS	**107**	**96**	**59**

Item Generation

In Round one a response rate of 62% (n=16) was achieved and produced agreement on 90% (n=96) of items. Valid scores were items that achieved at least 75% group consensus that the item was an effective measure of the construct. Individual and overall results were fed back to participants on the remaining 12 items. Fourteen participants (88%) completed the second round of item generation. All items failed to achieve consensus for inclusion in the draft

instrument. An informed decision was made not to further refine the items due to the extensiveness of items included in the instrument. This was based on a desire to control questionnaire length and reducing participant fatigue. At this stage the draft instrument contained 96 items alongside a set of demographic details (see table 3).

Instrument Refinement

A sample of 703 nurses out of a potential sample of 2825 nurses drawn from across four healthcare organisations completed the 96 items of the PCPI-S. This represented a 7:1 ratio of respondents to items and appropriate for confirmatory factor analysis [17].

Demographic details

A breakdown of the demographic details is outlined in Table 1. There was a good spread of responses across banding and experience. There was an uneven distribution across healthcare setting in the total sample as the organisations requested different samples to be surveyed.

Fit Indices

Chi square test of model fit value 4517, degrees of freedom 1516, p-value 0.000; RMSEA = 0.053; 90% RMSEA 0.051 – 0.055; CFI = 0.951.

All factor loading scores were significant and appropriate. With a sample size of 703 participants, factor loadings of 0.3 or higher are acceptable [18]. In order to produce as strong a statistical model as possible, a factor loading score was inflated to 0.4 or higher before being considered acceptable. Factor loading failing to achieve a score at or above this loading were removed from all subsequent analysis. A total of 37 items were removed from the questionnaire and the remaining 59 items were unchanged (see table 2). Factor estimates and standard errors are reported in Table 4. All factor loadings were statistically significant

($p<0.05$) and ranged from 0.417 – 0.921, producing a valid and psychometrically sound instrument.

Table 4: The factor loading and mean scores of the Person-centred Practice Inventory – Staff

Construct Scores and Items	**Mean**	**Est**	**SE**
Professionally Competent			
I have the necessary skills to negotiate care options.	4.31	0.452	0.035
When I provide care I pay attention to more than the immediate physical task.	4.88	0.602	0.032
I actively seek opportunities to extend my professional competence.	4.50	0.547	0.033
Developed Interpersonal Skills			
I ensure I hear and acknowledge others perspectives.	4.63	0.795	0.026
In my communication I demonstrate respect for others.	4.69	0.763	0.025
I use different communication techniques to find mutually agreed solutions.	4.63	0.607	0.031
I pay attention to how my non-verbal cues impact on my engagement with others.	4.69	0.629	0.028
Being Committed to the Job			
I strive to deliver high quality care to people.	4.44	0.746	0.038
I seek opportunities to get to know the person and their family in order to provide holistic care.	4.63	0.753	0.025
I go out of my way to spend time with people receiving care.	4.31	0.711	0.027
I strive to deliver high quality care that is informed by evidence.	4.69	0.766	0.025
I continuously look for opportunities to improve the care experiences.	4.88	0.780	0.031
Knowing Self			
I take time to explore why I react as I do in certain situations.	4.50	0.559	0.042
I use reflection to check out if my actions are consistent with my ways of being.	4.69	0.725	0.030
I pay attention to how my life experiences influence my practice.	4.38	0.577	0.039
Clarity of Beliefs and Values			
I actively seek feedback from others about my practice.	4.19	0.627	0.035
I challenge colleagues when their practice is inconsistent with our team's shared values and beliefs.	4.63	0.653	0.034

I support colleagues to develop their practice to reflect the team's shared values and beliefs.	4.75	0.758	0.032
Skill-Mix			
I recognise when there is a deficit in knowledge and skills in the team and its impact on care delivery.	4.25	0.525	0.038
I am able to make the case when skill mix falls below acceptable levels.	4.44	0.417	0.042
I value the input from all team members and their contributions to care.	4.50	0.539	0.039
Shared Decision-making Systems			
I actively participate in team meetings to inform my decision-making.	4.44	0.704	0.030
I participate in organisation-wide decision-making forums that impact on practice.	4.56	0.570	0.036
I am able to access opportunities to actively participate in influencing decisions in my directorate/division.	4.50	0.603	0.029
My opinion is sought in clinical decision-making forums (e.g ward rounds, case conferences, discharge planning).	4.31	0.673	0.028
Effective Staff Relationships			
I work in a team that values my contribution to person-centred care.	4.47	0.746	0.029
I work in a team that encourages everyone's contribution to person-centred care.	4.47	0.866	0.018
My colleagues positively role model the development of effective relationships.	4.00	0.731	0.022
Power Sharing			
The contribution of colleagues is recognised and acknowledged.	4.33	0.739	0.021
I actively contribute to the development of shared goals.	4.33	0.822	0.019
The leader facilitates participation.	4.53	0.709	0.021
I am encouraged and supported to lead developments in practice.	4.40	0.634	0.030
Potential for Innovation and Risk Taking			
I am supported to do things differently to improve my practice.	4.07	0.773	0.032
I am able to balance the use of evidence with taking risks.	4.21	0.597	0.029
I am committed to enhancing care by challenging practice.	4.57	0.729	0.027
The Physical Environment			
I pay attention to the impact of the physical environment on people's dignity.	4.71	0.652	0.044

I challenge others to consider how different elements of the physical environment impact on person-centredness (e.g. noise, light, heat etc).	4.57	0.683	0.034
I seek out creative ways of improving the physical environment.	4.36	0.700	0.030
Supportive Organisational Systems			
In my team we take time to celebrate our achievements.	3.93	0.595	0.032
My organisation recognises and rewards success.	4.21	0.450	0.038
I am recognised for the contribution that I make to people having a good experience of care.	4.21	0.627	0.037
I am supported to express concerns about an aspect of care.	4.21	0.608	0.039
I have the opportunity to discuss my practice and professional development on a regular basis.	4.21	0.702	0.031
Working with Patients Belief and Values			
I integrate my knowledge of the person into care delivery.	4.79	0.820	0.019
I work with the person within the context of their family and carers.	4.64	0.769	0.017
I seek feedback on how people make sense of their care experience.	4.29	0.747	0.022
I encourage people to discuss what is important to them.	4.57	0.790	0.023
Shared Decision-making			
I include the family in care decisions where appropriate and/or in line with the person's wishes.	4.57	0.830	0.021
I work with the person to set health goals for their future.	4.50	0.780	0.019
I enable people receiving care to seek information about their care from other healthcare professionals.	4.50	0.816	0.018
Engagement			
I try to understand the person's perspective.	4.64	0.921	0.013
I seek to resolve issues when my goals for the person differ from theirs perspectives.	4.50	0.785	0.020
I engage people in care processes where appropriate.	4.36	0.865	0.015
Having Sympathetic Presence			
I actively listen to people receiving care to identify unmet needs.	4.50	0.823	0.019
I gather additional information to help me support people receiving care.	4.07	0.713	0.023

I ensure my full attention is focused on the person when I am with them.	4.71	0.691	0.027
Providing holistic care			
I strive to gain a sense of the whole person.	4.57	0.647	0.030
I assess the needs of the person, taking account of all aspects of their lives.	4.57	0.795	0.018
I deliver care that takes account of the whole person.	4.50	0.880	0.014

(Final 59-Item Version)

Discussion

The Person-centred Practice Framework [2] has been promoted as an internationally recognised theoretical framework guiding the implementation of person-centred practice [19-20, 3]. The framework is central to practice development, increasingly recognised as a systematic approach to the implementation of person-centredness in practice [2]. These advancements however require the development of an instrument that can accurately measure change in person-centred practice that is internationally validated. The PCPI-S provides a measure of person-centred practice among nurses in this instance, but the instrument was designed to include statements relevant to all health professions (not just registered nurses). It is currently being further tested among multidisciplinary health professionals and health care settings. This instrument works on the micro, meso and macro level where it allows the examination of person-centred practice at the individual, unit, organisational and regional levels, addressing the requirements of Wilson and McCance [19] in helping to develop practice as well as provide strong quantitative evidence of impact.

The process involved in the development and testing of the PCPI-S provides a clear and transparent account and accurate evidence of the acceptability of definitions, item generation and a psychometrically acceptable tool. Confirmatory Factor Analysis is a strong theory-driven process of instrument development/testing. It provides a significant departure from tool development techniques that rely of data-driven analysis techniques such as Exploratory

Factor Analysis. These justify and label emergent factors post-hoc, often with little relevance to underlying person-centred theory (18). The mapping of the 17 constructs of the PCPI-S relating to staff attributes, the care environment and person-centred processes within the Person-centred Practice Framework (Figure 1) provide accurate measurement person-centred practice. The PCPI-S will therefore facilitate the measurement of successful implementation of person-centred practice, highlighting changes over time, thus providing direct empirical evidence for evaluation studies focused on implementing person-centred practice. This is a significant movement away from the use of insensitive proxy measures or poorly mapped instruments as identified by the comprehensive evaluation of instruments conducted by the Health Foundation [1]. The PCPI-S permits the comparison of data internationally and the measurement of the effectiveness of methods used in the implementation of person-centred practice.

Laird and colleagues [9] reported the importance of contextual and cultural issues that influence the development of person-centred cultures. The psychometric properties of the newly developed instrument provide empirical evidence that could assist in the comprehensive examination of significant elements of context and culture in the development of person-centred practice. This will help with the international implementation of person-centred practice in all healthcare settings and enable comparison of findings.

Limitations

The PCPI- S requires further testing with health professionals other than nursing staff. Nursing staff make up 75% of all healthcare provision [21] but the comprehensive application of person-centred practice by all healthcare staff ensures its full effectiveness. There was a noticeable level of non-responses and drop out during the instrument

development phases that may limit international agreement of definitions and item inclusion. However, response rates for each initial phase of the study, when most needed, were high and reflected diversity of opinions. The low response rate is a study limitation however the final sample (n=703) does provide acceptable respondent to item ratio for effective factor analysis. The use of the PCPI-S with samples from across international multi-professional populations will help provide further statistical evidence of the psychometric properties of the instrument, such as in the area of reliability and additional validity testing.

CONCLUSION

Person-centred practice is an internationally recognised standard of quality care impacting on the experience of care for healthcare professional, service users, families and care-partners. The Person-centred Practice Framework is an internationally recognised theoretical framework guiding its implementation. The PCPI-S provides psychometric evidence for the measurement of contextual and cultural issues that impact on the development of person-centred practice that is aligned to the Person-centred Practice Framework. The development of the PCPI-S allows for the generation of evidence from comparative studies internationally across settings, and clinical areas.

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