Abstract

The purpose of the study was to undertake rigorous psychometric testing of the Caring Efficacy Scale in a sample of Registered Nurses. A cross-sectional survey of 2000 registered nurses was undertaken. The Caring Efficacy Scale was utilised to inform the psychometric properties of the selected items of the Caring Efficacy Scale. Cronbach's Alpha identified reliability of the data. Exploratory Factor Analysis and Confirmatory Factor Analysis were undertaken to validate the factors. Confirmatory factor analysis confirmed the development of two factors; *Confidence to Care* and *Doubts and Concerns*. The Caring Efficacy Scale has undergone rigorous psychometric testing, affording evidence of internal consistency and goodness-of-fit indices within satisfactory ranges. The Caring Efficacy Scale is valid for use in an Australian population of registered nurses. The scale can be used as a subscale or total score reflective of self-efficacy in nursing. This scale may assist nursing educators to predict levels of caring efficacy.

Key Words: caring, efficacy, nurses, validity reliability

INTRODUCTION

Human caring is described by Watson,[1] and Leininger,[2] as being central to the discipline and profession of nursing. Early research by Leininger identified nurses are in the unique position to engage the "caring experience" to promote healing and improve health outcomes in those who are well, unwell, disabled and dying. Coates,[3] reported current healthcare environments show trends towards emphasizing accountability with healthcare programs and are concerned more with costs and numeric outcomes, whereas nursing tradition values process and quality of the patient "caring experience". Exploring and assessing the nature of caring through research is important and essential to advance nursing knowledge and improve "the caring experience" between patients and nurses.[3]

BACKGROUND

Caring efficacy is the belief or ability of a person to convey a caring orientation and build up caring relationships with patients. The emphasis on the caring relationship and the caring experience in the seminal work of Watson's transpersonal caring theory [4, 5, 1] assisted in developing the Caring Efficacy Scale.[3] Self-efficacy is the belief one has the ability to organise the motivation, cognitive resources and courses of action required to be in command of one's work.[6] Early work by Coates, [3] reported self-efficacy theory provides a connection between human beliefs and behaviours in environmental situations and therefore 'informs the definition and assessment of caring.[3 (p. 54)] Nurses often report they encounter obstacles to their ability to express caring behaviours and to find sense and value in their work with patients which leads to diminished job satisfaction.[7, 8, 9]

Important characteristics of current nursing practice include nurses' ability to develop and continue therapeutic relationships with patients, having autonomy and

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control over the practice environment[10] and more involvement in decision making.[11] In addition, employee satisfaction is enhanced when organisations offer access to authority.[12] Despite this, nurses continue to express feelings of powerless in their ability to make decisions.[13]

Nurses require confidence in having the authority necessary to provide skilled care and be comfortable as decision-makers and care providers.[13] Research demonstrates relationship exists between nurses' self-efficacy and nurses' professional practice behaviours[14] which ultimately may affect the quality of patient care provided.

Whilst a number of scales measure caring[15] and domain specific self-efficacy[16] independently, the Caring Efficacy Scale[3] was the only one found at the time of this study measuring self-efficacy in nursing. The Caring Efficacy Scale has undergone testing for content validity (utilising expert groups) and concurrent validity with previous reliability testing reporting Cronbach's Alpha reliability coefficients ranging from 0.85 to 0.92. However the psychometric properties of the Caring Efficacy Scale have yet to be subjected to factor analysis. Therefore, the aim of this study was to test the psychometric properties of the original 30 items of the Caring Efficacy Scale including factor analysis within a diverse Australian Registered Nurse population.

METHODS

Aim

The aim of this study was to undertake rigorous psychometric testing of the Caring Efficacy Scale using exploratory factor analysis and confirmatory factor analysis in order to examine the construct validity and reliability of the selected items chosen from the scale, in a sample of Registered Nurses.

Study Design

A cross-sectional research survey design was undertaken in a diverse population of Australian registered nurses. Data was collected in 2008.

Participants

The study population and criteria for selection included Registered Nurses in Australia who were at the time members of an Australian professional and industrial organisation. Two thousand (2000) Registered Nurses were randomly selected and stratified according to gender, to ensure the avoidance of sampling bias and sampling error. These eligible participants were selected from the register by staff of the industrial and professional organisation. [17, 18]

At the time of this current study there was no national regulatory authority for nurses in Australia. In the first instance the nursing and midwifery regulatory organisations for each state were approached prior to conducting the study. The nursing and midwifery regulatory bodies from two major states of Australia were not able to participate in this study. Regulatory bodies of the two Australian territories were also not able to provide the services required to recruit participants. Following this, Australia's largest professional and industrial nursing and midwifery and assistants in nursing organisation (200,000 members) with branches in each state and territory, agreed to participate in the recruitment of the participants for this study at a national level. It was reported in 2008, that the number of registered and enrolled nurses employed as nurses in Australia was 272,741.[19] It was therefore expected that a representative population of registered nurses could be obtained from this organisation. Four major Australian states from a total of six agreed to participate. Numbers were too small for the processes of randomisation and stratification

according to gender from the members of the two territories and the smaller state (Tasmania) and were therefore not included in this study. Western Australia (one larger state) was unable to participate at the time of this study. [18]

Sample Size

This study was part of a larger study in which Structural Equation Modelling (SEM) [20] analysis was undertaken. It was assumed there would be a 32% response rate which would be adequate for the larger study based on the largest instrument[21], Ways of Coping Questionnaire,[22] comprising of 66 items and that approximately 10 participants per item would be received[18] to calculate sample size. A 31.9% (n = 639) response rate was achieved in the survey. It was therefore expected this sample size would adequately power the larger study. Evidence based strategies for recruitment were employed as follows: sample size was calculated for a larger number of participants in order to reach an adequate response rate; an advanced notification letter was placed in the organisation's journal, a preaddressed 'internal' envelope for survey return was included and follow up post cards posted to prompt returns at one month following initial questionnaire distribution.[17, 18]

Ethical considerations

This study was approved by the University's Human Research Ethics Committee. An information sheet explaining the purpose of the survey was sent to each participant. The voluntary anonymous return of the questionnaires via Australia Post from the participants indicated their consent to participate.

The Instrument – Caring Efficacy Scale

The Caring Efficacy Scale developed by Coates,[3] is a 30-item, 6-point, Likert-type self-report scale (strongly disagree –3 to strongly agree +3), which assesses

nurses' caring efficacy (i.e. confidence relating to ability to express a caring orientation and develop caring relationships with patients). This 30-item scale consists of 23 positively-worded and seven negatively-worded items and indicated a high level of internal consistency; Cronbach's alpha for this scale was 0.857.[3] The scale (see Table 1) was developed based on Watson's theory of transpersonal caring[4, 5, 1] and social learning theory.[6] Permission for use of the Caring Efficacy Scale was obtained from the author prior to commencing the study.

Table 1 here

DATA ANALYSIS

Data analysis was undertaken using SPSS version 18.0. Descriptive analyses were used to examine all variables and were represented as percentages. Descriptive analyses of individual items in each subgroup of the Caring Efficacy Scale and the various demographic factors were also conducted. Missing Values Analysis on the Caring Efficacy Scale was conducted and any participants who had $\geq 5\%$ missing values were excluded from further consideration. Regression imputation was used to replace data for the remaining individuals with missing values. Imputed values were compared in terms of location and variability with non imputed values and it was found both were comparable. Data were then randomised into two samples of size n = 169 (20%) and n = 470 (80%), to conduct the exploratory and confirmatory factor analyses respectively.

Exploratory factor analysis and confirmatory factor analysis were conducted using the original 30 item Caring Efficacy Scale with this diverse population of Australian Registered Nurses. Exploratory Factor Analyses, with Principal Component Analysis were performed followed by a parallel analysis being undertaken to determine the number of factors, and a subsequent Principal Axis

Factoring to determine the structure of the subscales. An *a priori* decision was made to only consider variables with loadings of 0.40 and above.[23] The resultant constructs from Principal Axis Factoring were then validated using Confirmatory Factor Analysis in AMOS (version 18) and the data held out (80%) for this purpose. The Confirmatory Factor Analysis was fit using maximal likelihood estimation and model fit was evaluated using the Goodness of Fit index (GFI) [24]and the Root Mean Square Error of Approximations (RMSEA). The raw and scaled χ^2 fit statistics were also included for reasons of convention; however these measures of model fit have been shown to be upwardly biased with sample size in measurement model studies.[25] Models were considered to adequately fit if they had a GFI > 0.9 [27]and a RMSEA < 0.05.[26]

RESULTS

Characteristics of Participants of the Larger Survey

A total of 639 Registered Nurses participated in the larger survey. There were 581 female respondents. The majority of respondents were aged between 40 and 50 years (402) with the overall age range of 20 to 76 years of age.[18] Results in this original survey showed 183 of respondents had worked as a Registered Nurse for 21-30 years and 314 had worked in their current job for five years or less. The respondents' education levels varied from hospital certificate (non-tertiary) through to PhD with 424 Registered Nurses reported having a tertiary qualification in nursing. The majority of respondents (n=566 were employed as either permanent part time or casual.[17]

In this larger study, mean caring efficacy scores were found to be 5.074 with a standard deviation (SD) 0.497. Values for caring efficacy ranged from 3.47 to 6.00. One hundred per cent (100 %) of nurses sampled showed high perceived caring efficacy scores on average (> 3.0) in this sample.[18]

Construct Validity

To perform Exploratory Factor Analysis, first a Principal Component Analysis (PCA) was performed on the 30 items originally included in the Caring Efficacy Scale, to determine the number of factors. Parallel analysis (based on the principal components) was then used to determine the number of factors whose eigenvalues were significantly greater than 1 ($p<0.05$). This was followed by Principal Axis Factoring with oblique rotation (promax), to examine the finer structural detail of the subscales and it was suggested a two-factor model should be used. Pattern coefficients whose absolute value was less than 0.40 were excluded from further consideration. The PAF suggested only 28 out of the original 30 items included in the Caring Efficacy Scale were instrumental in describing the caring efficacy subscales for this Australian registered nurse population. Items (1) *I do not feel confident in my ability to express a sense of caring to my clients/patients* and (2) *If I am not relating well to a client/patient, I try to analyse what I can do to reach him/her*, showed absolute values less than 0.40 and hence were excluded from further consideration. Perusal of the Inter-Factor Correlation in the Exploratory Factor Analysis, indicated moderate correlations ($r = 0.470$) between factors. This suggests any subsequent measurement model should allow for correlation amongst subscales (an oblique measurement model).

The two subscales identified were:

1. *Confidence to Care:* (14 items) asked questions relating to confidence and ability to relate to and care for patients (fourteen questions).

2. *Doubts and Concerns*: (14 items) asked questions which identified self doubt in a person's ability to relate to and care for patients (14 questions). (See Table 2).

Table 2 here

The two factor model was tested to evaluate data from the 28 items retained using confirmatory factor analysis. All 28 items loaded significantly on their respective factors, *Confidence to Care* and *Doubts* and *Concerns*. Although the χ2 suggested a lack of fit (681.62, df = 344 [p < 0.01]), this fit index has been widely established to be upwardly biased with sample size and provides a poor measure of measurement model fit. The other fit indices suggest the measurement model fit the data well, $χ2/df$ = 1.981, RMSEA = 0.046 and GFI = 0.902. The model did not require modification in order to provide adequate fit.

Descriptive Statistics of the CES Subscales

The frequencies of individual items in each subgroup i.e., Self Efficacy and Doubts and Concerns of the Caring Efficacy Scale and the medians (minimum and maximum) for all individual items and groups within the various demographic factors were conducted and are shown in Table 3.

Table 3 Here

Reliability Analysis

Reliability analysis for the two subscales (identified in the subsequent factor analysis) suggested they were reliable. A Cronbach's alpha coefficient was calculated for each of the subscales of the Caring Efficacy Scale using the entire sample to determine internal consistency of the measure. The results showed a Cronbach's

alpha of 0.86 for *Confidence to Care*, and 0.78, for *Doubts and Concerns*. The overall Cronbach's alpha for the scale was 0.86.

DISCUSSION

The Caring Efficacy Scale was found to be a valid and reliable instrument to measure caring efficacy in this Australian population of nurses. This scale has been previously reported to show consistent reliability in other nursing settings and populations.[3, 13, 28] The Cronbach's alpha coefficient for the overall Caring Efficacy Scale was 0.856. For the Caring Efficacy subscales, the Cronbach's alpha coefficients were 0.86 for Factor 1, Confidence to Care and 0.78 for Factor 2, Doubts and Concerns. An extensively used standard for self-report measures that are to be used as a screening instrument, recommends an internal consistency of greater than 0.70.[29] Removal of the two items from the Caring Efficacy Scale resulted in an acceptable fit of the two-factor model to the data from this large sample of registered nurses.[30] The results therefore support the measurement validity of this tool for registered nurses in different healthcare settings in Australia and suggest it is rigorous enough for intermittent or continuous assessment of caring efficacy in nurses.

In addition, studies have reported there is currently a focus on cost restraints with an expectation of staff to achieve more with fewer resources in hospital settings. These working conditions are inconsistent with nurses' values and their ability to develop caring relationships with their patients.[8] Furthermore, nurses' job satisfaction is reported to be affected by the ability of nurses to provide care and devote time to patient care. In turn, this provides constant challenges to nursing values and the caring experiences of nurses [3], which may also have an effect upon job satisfaction.[7,31]

To assist nurses in dealing with ever-changing healthcare conditions and reform activities aimed at restructuring health care,[14] nursing educators and healthcare

organisations should be aware of the different issues that affect self-efficacy in

nursing as found in this study. According to Manojlovich, [14] nursing leaders such as

educators should endeavour to foster and implement the theoretical elements of self-

efficacy as described by Bandura [6] to support nurses in their practice. An

understanding of the characteristics of self-efficacy, namely, performance

accomplishments (personal mastery experiences), vicarious experience (role

modelling), verbal persuasion (convincing people that they can be successful) and

physiological information (self-evaluation of physiological and emotional states), can

enable nursing educators to develop professional development programmes aimed at

enhancing self-efficacy for all registered nurses.[14]

Hence, incorporation of a routine individual assessment of self-efficacy into

professional development and orientation programmes rather than using 'one-size-

fits-all nursing education programmes[13] may provide useful information on the

different types of resources required to enhance these programmes for nurses. Thus,

interventions that promoting the development of confidence and the abilities of

registered nurses to have control over their work outcomes may enhance caring

efficacy. This study provides the opportunity to further examine caring efficacy in

registered nurses in the Australian context in order to obtain a better understanding of

the educational and professional needs that may exist in this population.

Strengths and Limitations

The major strength of this study was the use of several robust statistical tests

in a large and diverse sample of Australian Registered Nurses to test the factor

structure of the Caring Efficacy Scale. The current study is also the first to examine

the structure of the Caring Efficacy Scale measuring nurses' perceived caring

behaviours. Further validity testing is needed to test the scale among other groups of nurses in other settings.

CONCLUSION

The Caring Efficacy Scale has undergone rigorous psychometric testing in a large and diverse Australian sample of registered nurses, affording evidence of internal consistency and goodness-of-fit indices within satisfactory ranges. Specifically, an exploratory factor analysis was conducted followed by confirmatory factor Analysis of the Caring Efficacy Scale. Twenty-eight of the original 30 items were retained after the data underwent exploratory and confirmatory factor analyses. An initial exploratory factor analysis generated a two-factor solution: *Confidence to Care* and *Doubts and Concerns.* The psychometric properties of the attained factors were adequate enough in relation to internal consistency and fit of the two factor model.

Psychometric testing of the Caring Efficacy Scale has developed a robust version of the scale however additional validity testing is required for confirmation in different nursing settings. The scale can be used as a subscale or total score reflective of self-efficacy in nursing. This scale may assist nursing educators to predict levels of self-efficacy in nursing and evaluate the effects of professional development and orientation programmes aimed at improving self-efficacy in nurses. Further, improving self-efficacy in nursing may improve the caring experience of nurses.

ACKNOWLDEGEMENTS:

REFERENCES

1. Watson, J. Watson's theory of transpersonal caring. In P. H. Walker & B. Neuman (Eds.), *Blueprint for use of nursing models: Education, research, practice, and administration.* (pp. 141–184). New York: National League for Nursing, 1996.

2. Leininger, M. *The phenomenon of caring importance, research questions, and theoretical considerations*. In Qualitative Research Methods in Nursing (Leininger M. ed.), Grune & Stratton, Orlando, Florida, 1988.

3. Coates, C. The caring efficacy scale: Nurses' self-reports of caring in practice settings. *Advanced Practice Nursing* 1997; **3**: 53–59.

4. Watson, J. *Nursing: The philosophy and science of caring.* Boston, MA: Little, Brown and Company, 1979.

5. Watson, J. New dimensions of human caring theory. *Nursing Science Quarterly* 1988; **1**: 175–181.

6. Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review* 1977; **84**: 191–215.

7. Kalisch B, Tschanen D, Hyunhwa L. Does missed nursing care predict job satisfaction? Journal of Healthcare Management 2011; **56:** 117-131.

8. Gordon S. Nursing Against the Odds: How Health Care Cost Cutting, Media Stereotypes, and Medical Hubris Undermine Nurses and Patient Care. Ithaca, NY: Cornell University Press, 2005.

9. Peery A. Caring and burnout in registered nurses: what's the connection? *International Journal of Human Caring* 2010; **14:** 53-60.

10. Scott, J., Sochalski, J., & Aiken, L. Review of magnet hospital research: Findings and implications for professional nursing practice. *Journal of Nursing Administration* 1999; **29:** 9–18.

11. Aiken, L., Sloane, D., Clarke, S., Cho, E., You, l., Finlayson, M., Kanai-pak, M. & Ungsuroch, A. Importance of work environments on hospital outcomes in nine countries. *International Journal for Quality in Health Care* 2011; **23:** 357–364.

12. Laschinger, H., Shamian, J., & Thomson, D. Impact of magnet hospital characteristics on nurses' perceptions of trust, burnout, quality of care, and work satisfaction. *Nursing Economics* 2001; **19:** 209–219.

13. Manojlovich M. Promoting nurses' self-efficacy: a leadership strategy to improve practice. *Journal of Nursing Administration* 2005a; **35:** 271-278.

14. Manojlovich, M. The effects of nursing leadership on hospital nurses' professional practice behaviours. *Journal of Nursing Administration* 2000b; **35:** 366–374.

15. Beck, C. (1999). Quantitative measurement of nursing. *Journal of Advanced Nursing* 1999; **30:** 24-32.

16. Schwarzer, R., Bäβler, J., Kwiatek, P. & Schröder, K. The assessment of optimistic self-beliefs: comparison of the German, Spanish, and Chinese versions of the General Self-Efficacy Scale. *Applied Psychology: An International Review* 1997; **46:** 69-88.

17. Anderson, J., & Gerbing, D. Structural equation modelling in practice: A review and recommended two-step approach. *Psychological Bulletin* 1988; **103:** 411–423.

18. Kaplowitz, M., Hadlock, T., & Levine, R. A comparison of web and mail survey response rates. *Public Opinion Quarterly* 2004; **68:** 94–101.

19. Folkman, S., & Lazarus, R. *Ways of coping questionnaire permissions set manual, test booklet, scoring key*. California: Mind Garden, 1988.

20. Nunnally, J. *Psychometric theory*. New York: McGraw-Hill, 1978.

21. Edwards, P., Roberts, I., Clarke, M., DiGuiseppi, C., Pratap, S., Wentz, R. & Kwan, I. Increasing response rates to postal questionnaires: systematic review. *British Medical Journal* 2002; **324:** 1183.

22. Reid, C. Examination of relationships and mediating effects of self-efficacy, locus of control, coping and the practice environment on caring efficacy and job satisfaction in Australian registered nurses. *PhD thesis*, Queensland University of Technology, 2012.

23. Reid, C., Anderson, D. & Hurst, C. (Article in press). Examination of socio-demographics and job satisfaction in Australian registered nurses. *Collegian: The Australian Journal of Nursing Practice, Scholarship and Research.*

24. Bandura, A. *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall, 1986.

25. Costello, A. and Osborne, J. Best Practices in Exploratory Factor Analysis: Four Recommendations for Getting the Most From Your Analysis. *Practical Assessment, Research and Evaluation* 2005; **10**.

26. Stallman, H., & Hurst, C. Factor structure of the Frost Multidimensional Perfectionism Scale in university students. *Australian Psychologist* 2011; **46:** 229-236.

27. Browne, T. *Confirmatory Factor Analysis for Applied Research (Methodology in the Social Sciences)* New York: The Guilford Press, 2006.

28. Browne, M. & Cudeck, R. Alternative ways of assessing model fit. In K.A. Bollen, y

    J.S. Long (Eds.), *Testing structural equation models*. Beverly Hills, CA: Sage, 1993.

29. Meretoja R, Leino-Kilpi H. Instruments for evaluating nurse competence. *Journal of*

    Nursing Administration 2001; **31:** 346-352.

30. Aiken, L., Clarke, S., Sloane, D., Lake, E. & Cheney, T. Effects of Hospital Care

    Environment on Patient Mortality and Nurse Outcomes. *Journal of Nursing*

    Administration 2008; **38:** 223-229.

31. Murray, T. Implications for staff development of perceived self-efficacy in nurses

    who changed to home care practice. *Journal for Nurses in Staff Development* 1999;

    15: 78-82.

Table 1. The original 30 items of Caring Efficacy Scale (Coates, 1997).

1. I do not feel confident in my ability to express a sense of caring to my clients/patients.

2. If I am not relating well to a client/patient, I will try to analyse what I can do to reach him/her.

3. I feel comfortable in touching my clients' patients in the course of care giving

4. I convey a sense of personal strength to my clients/patients.

5. Clients/patients can tell me almost anything and I won't be shocked.

6. I have an ability to introduce a sense of normalcy in stressful conditions.

7. It is easy for me to consider the multi-facets of a clients/patients care, at the same time as I am listening to them.

8. I have difficulty in suspending my personal beliefs and biases in order to hear and accept a client/patient as a person.

9. I can walk into a room with a presence of serenity and energy that makes clients/patients feel better.

10. I am able to tune into a particular client/patient and forget my personal concerns.

11. I can usually create some way to relate to most any client/patient.

12. I lack confidence in my ability to talk to clients/patients from backgrounds different from my own.

13. I feel if I talk to clients/patients on an individual, personal basis, things might get out of control.

14. I use what I learn in conversations with clients/patients to provide more individualised care.

15. I don't feel strong enough to listen to the fears and concerns of my clients/patients.

16. Even when I'm feeling self-confident about most things, I still seem to be unable to relate to clients/patients.

17. I seem to have trouble relating to clients/patients.

18. I can usually establish a close relationship with my clients/patients.

19. I can usually get patients/clients to like me.

20. I often find it hard to get my point of view across to patients/clients when I need to.

21. When trying to resolve a conflict with a client/patient, I usually make it worse.

22. I think a client/patient is uneasy or may need some help, I approach that person.

23. If I find it hard to relate to a client/patient, I'll stop trying to work with that person.

24. I often find it hard to relate to client/patients from a different culture than mine

25. I have helped many clients/patients through my ability to develop close, meaningful relationships.

26. I often find it difficult to express empathy with clients/patients.

27. I often become overwhelmed by the nature of the problems clients/patients are experiencing.

28. When a client/patient is having difficulty communicating with me, I am able to adjust to his/her level.

29. Even when I really try, I can't get through to difficult clients/patients.

30. I don't use creative or unusual ways to express caring to my clients/patients.

Table 2: Coefficients from both Exploratory (pattern coefficients) and Confirmatory Factor Analysis (Standardised betas, βz).

Number	ITEM #		
	Factor 1: Confidence to Care	**Factor 1 Self-Efficacy (EFA)**	**Factor 1 Self-Efficacy βz**
4	I convey a sense of personal strength to my clients/patients.	0.769	0.700
11	I can usually create some way to relate to most any client/patient.	0.714	0.679
5	Clients/patients can tell me almost anything and I won't be shocked.	0.688	0.618
6	I have an ability to introduce a sense of normalcy in stressful conditions.	0.677	0.727
9	I can walk into a room with a presence of serenity and energy that makes clients/patients feel better.	0.625	0.687
18	I can usually establish a close relationship with my clients/patients.	0.608	0.414
7	It is easy for me to consider the multi-facets of a clients/patients care, at the same time as I am listening to them.	0.593	0.696
10	I am able to tune into a particular client/patient and forget my personal concerns.	0.590	0.539
3	I feel comfortable in touching my clients' patients in the course of care giving.	0.568	0.458
25	I have helped many clients/patients through my ability to develop close, meaningful relationships.	0.477	0.410
19	I can usually get patients/clients to like me.	0.476	0.435
14	I use what I learn in conversations with clients/patients to provide more individualised care.	0.460	0.388
22	I think a client/patient is uneasy or may need some help, I approach that person.	0.438	0.461
28	When a client/patient is having difficulty communicating with me, I am able to adjust to his/her level.	0.373	0.372

	Factor 2: Doubts and Concerns	**Factor 1 Doubts & Concerns EFA**	**Factor 2 Doubts & Concerns βz**
29	Even when I really try, I can't get through to difficult clients/patients.	0.615	0.573
20	I often find it hard to get my point of view across to patients/clients when I need to.	0.597	0.485
12	I lack confidence in my ability to talk to patients from backgrounds different to my own	0.587	0.546
21	When trying to resolve a conflict with a patient I usually make it worse.	0.519	0.443
15	I don't feel strong enough to listen to the fears and concerns of my clients/patients.	0.507	0.502
27	I often become overwhelmed by the nature of the problems clients/patients are experiencing.	0.441	0.440
8	I have difficulty in suspending my personal beliefs and biases in order to hear and accept a client/patient as a person.	0.437	0.405
16	Even when I'm feeling self-confident about most things, I still seem to be unable to relate to clients/patients.	0.423	0.488
23	If I find it hard to relate to a client/patient, I'll stop trying to work with that person.	0.416	0.322
24	I often find it hard to relate to client/patients from a different culture than mine.	0.398	0.542
30	I don't use creative or unusual ways to express caring to my clients/patients.	0.395	0.349
26	I often find it difficult to express empathy with clients/patients.	0.381	0.521
13	I feel if I talk to clients/patients on an individual, personal basis, things might get out of control.	0.352	0.396
17	I seem to have trouble relating to clients/patients.	0.336	0.508

Table 3: Frequency (percentages) of individual items in each group along with the Median (Min and Max) Self-Efficacy and Doubts and Concerns for all individual items within the various demographic factors.

Factor		n(%)	SE	DC
Total			39.47 (19.18, 45.68)	33.67 (11.45, 89.12)
State				
Queensland		129 (28.48%)	40.32 (29.28, 45.5)	33.82 (21.49, 39.12)
New South Wales		190 (41.94%)	39.58 (19.18, 45.68)	33.71 (11.45, 39.12)
Victoria		105 (23.18%)	38.44 (19.35, 45.5)	33.53 (19.87, 39.12)
South Australia		29 (6.4%)	40.45 (29.97, 45.5)	33.88 (26.27, 38.72)
Sex				
Female		432 (92.9%)	39.53 (19.18, 45.68)	33.67 (11.45, 39.12)
Male		33 (7.1%)	37.9 (24.5, 45.5)	34.34 (16.89, 28.8)
Sector				
Private		5 (18.32%)	38.94 (19.35, 45.5)	33.41 (20.81, 39.12)
Public		282 (60.78%)	38.83 (19.24, 45.68)	33.59 (11.45, 39.12)
Aged Care		45 (9.7%)	40.71 (28.42, 45.5)	34.17 (24.16, 39.12)
Community		52 (11.2%)	40.6 (19.18, 45.5)	34.91 (28.02, 39.12)
Marital status				
Single		83 (17.77%)	37.94 (19.24, 45.5)	32.89 (22.86, 39.12)
Married		306 (65.52%)	39.67 (19.18, 45.68)	33.71 (11.45, 39.12)
Separated/Divorce		78 (16.71%)	39.97 (22.18, 45.5)	34.12 (16.89, 39.12)
Job status				
Full time		41 (8.91%)	40.25 (24.5, 45.5)	33.57 (11.45, 39.12)
Part time		215 (46.74%)	39.53 (19.35, 45.68)	33.65 (19.87, 39.12)
Casual		204 (44.35%)	39.07 (19.18, 45.5)	33.75 (20.01, 39.12)
Speciality				
Midwifery		150 (32.1%)	38.72 (26.19, 45.68)	33.53 (16.89, 39.12)
Medical/Surgical		100 (21.46%)	38.12 (19.35, 45.5)	33.6 (20.28, 39.12)
Critical Care		15 (3.22%)	38.94 (29.09, 44.89)	33.19 (24.71, 39.12)
Aged care		104 (22.32%)	40.66 (19.18, 45.5)	34.17 (24.16, 39.12)
Paediatrics		27 (5.79%)	40.25 (31.62, 45.5)	34.42 (11.45, 38.8)
Psychiatry		51 (10.94%)	39.29 (30.21, 45.5)	33.44 (20.01, 39.12)
Perioperative		19 (4.08%)	41.78 (22.18, 45.5)	35.1 (29.14, 39.12)
Education				
Certificate		116 (25.05%)	40.34 (30.89, 45.68)	33.54 (11.45, 39.12)
Diploma		40 (8.64%)	38.21 (19.18, 45.5)	32.86 (16.89, 39.12)
Bachelor		134 (28.94%)	39.38 (22.18, 45.5)	32.94 (20.01, 39.12)
Grad. Cert/Diploma		134 (28.94%)	39.31 (19.24, 45.5)	33.9 (19.87, 39.12)
Masters/PhD		39 (8.42%)	38.06 (29.31, 45.5)	34.96 (20.81, 39.12)
Location				
Metropolitan		278 (59.91%)	39.3 (19.18, 45.5)	33.67 (19.9, 39.12)
Provincial/Regional		110 (23.71%)	39.42 (19.35, 45.68)	34.09 (11.45, 39.12)
Rural/Remote		76 (16.38%)	40.29 (31.64, 45.5)	33.45 (16.89, 39.12)
Age group				
	≤30	39 (8.41%)	37.33 (29.09, 43.32)	32.81 (24.03, 39.12)
	31-40	97 (20.91%)	37.98 (24.5, 45.5)	33.27 (21.49, 38.72)
	41-50	171 (36.85%)	39.25 (19.24, 45.68)	34.07 (19.9, 39.12)
	51-60	129 (27.8%)	40.42 (22.18, 45.5)	34.0 (11.45, 39.12)
	>60	28 (6.03%)	41.93 (19.18, 45.5)	34.03 (20.01, 39.12)
Experience (yrs)	≤ 5	52 (11.21%)	37.86 (24.5, 44.61)	33.13 (24.03, 39.12)
	6-15	103 (22.2%)	39.23 (19.18, 45.5)	33.48 (21.49, 39.12)
	16-25	125 (26.94%)	38.59 (19.24, 45.5)	33.65 (19.9, 39.12)
	>25	184 (39.65%)	40.52 (22.18, 45.68)	33.98 (11.45, 39.12)

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Current job (yrs)	<=5	235 (50.87%)	38.94 (19.35, 45.68)	33.67 (11.45, 39.12)
	6-15	162 (35.09%)	39.7 (19.18, 45.5)	34.02 (19.9, 39.12)
	>15	65(14.07%)	40.32 (29.16, 45.21)	32.4 (16.89, 39.12)