International Psychogeriatrics (2010), 22:1, 101–108 © International Psychogeriatric Association 2009
doi:10.1017/S1041610209990688

Development and initial testing of the Person-centered Care Assessment Tool (P-CAT)

David Edvardsson,[1,2] Deirdre Fetherstonhaugh,[2] Rhonda Nay[2] and Stephen Gibson[3]

[1] *Department of Nursing, Umeå University, Umeå, Sweden*
[2] *Australian Centre for Evidence Based Aged Care (ACEBAC), La Trobe University, Melbourne, Australia*
[3] *National Ageing Research Institute (NARI), Victoria, Australia*

ABSTRACT

Background: Person-centered care is increasingly regarded as being synonymous with best quality care. However, the concept and its precise meaning is a subject of debate and reliable and valid measurement tools are lacking.

Method: This article describes the development and initial testing of a new self-report assessment scale, the Person-centered Care Assessment Tool (P-CAT), which measures the extent to which long-term aged care staff rate their settings to be person-centered. A preliminary 39-item tool generated from research literature, expert consultations and research interviews with aged care staff (n = 37), people with early onset dementia (n = 11), and family members (n = 19) was distributed to a sample of Australian aged care staff (n = 220) and subjected to item analysis and reduction.

Results: Psychometric evaluation of the final 13-item tool was conducted using statistical estimates of validity and reliability. The results showed that the P-CAT was shown to be valid and homogeneous by factor, item and content analyses. Cronbach's α was satisfactory for the total scale (0.84), and the three subscales had values of 0.81, 0.77, and 0.31 respectively. Test–retest reliability were evaluated (n = 26) and all analyses indicated satisfactory estimates.

Conclusion: This study provides preliminary evidence in support of the psychometric properties of the P-CAT when used in an Australian sample of long-term aged care staff. The tool contributes to the literature by making it possible to study person-centered care in relation to health outcomes, organizational models, characteristics and levels of staffing, degrees of care needs among residents, and impact of interventions.

Key words: dementia, person-centered care, long-term care, questionnaires

Introduction

This paper reports on the development and initial testing of a new self-report assessment scale, the Person-centered Care Assessment Tool (P-CAT). This tool aims to measure the extent to which staff rate their aged care setting to be person-centered. Person-centered care is a popular concept for describing best practice care for people with dementia, but it is in need of clinically relevant, valid and reliable measurement tools.

The increasing prevalence of dementia supports the need to develop and evaluate best practice models that promote a good quality of life for people with the disease. Caring for people with dementia involves compensating for declining abilities to fulfill basic physical and psychosocial needs (Norberg, 1998). Including both these dimensions in the care of people with dementia is imperative as high quality care involves both completing tasks and supporting everyday life needs (Sandman *et al.*, 2006). A person-centered approach to care practices for people with dementia is increasingly being regarded as synonymous with best quality care that includes both dimensions of nursing care (Ericson *et al.*, 2001; Slater, 2006; Murphy, 2007). Person-centeredness was first described within Rogerian psychotherapy (Rogers, 1961), and was later contextualized into dementia care as a response to "malignant social psychology", e.g. care-giving relationships which devalue, dehumanize, depersonalize and diminish the person with dementia (Kitwood,

Correspondence should be addressed to: David Edvardsson, Department of Nursing, Umea University, S-901 87 Umea, Sweden. Phone: +46 90 786 91 43; Fax: +46 90 786 91 69. Email: david.edvardsson@nurs.umu.se. Received 3 April 2009; revision requested 8 May 2009; revised version received 26 May 2009; accepted 10 June 2009. First published online 27 July 2009.

https://doi.org/10.1017/S1041610209990688 Published online by Cambridge University Press

1997). The core quality of person-centered care is to value and use people's subjective experience of their illness regardless of cognitive ability (McCormack, 2004; Downs *et al.*, 2006). A recent literature review described person-centered care as maintaining personhood in spite of declining cognitive ability, striving to take the standpoint of the patient, acknowledging personal experiences of life and relationships, and including the social environment as a therapeutic agent (Edvardsson *et al.*, 2008). Furthermore, person-centered care has been expressed using the equation PCC (person-centered care) = V+I+P+S, where V, I, P and S stand for: valuing people with dementia (V); treating people as individuals (I); looking at the world from the person's perspective (P); creating a positive social environment (S) (Brooker, 2007).

The literature describes several strategies for providing person-centered care. Incorporating biographical knowledge in care is one approach aiming to assist staff in recognizing and treating people with dementia as individuals rather than as patients or tasks (Clarke, 2000). Also, knowing about a patient's earlier life can provide cues about how to interpret behavior and establish individualized care and treatment (Clarke *et al.*, 2003). Reminiscence is another strategy believed to promote person-centeredness. Reminiscence is described as confirming the previous life of people with dementia by sharing autobiographical memories, for example through pictures, music and scrapbooks (Brooker, 2004; Kontos, 2005; Downs *et al.*, 2006). Acknowledging the person's interpretation of reality is also described in relation to validation therapy, and this is also believed to promote confidence and well-being (Neal and Barton Wright, 1999). Another strategy for person-centered care is to prioritize the experience of the individual person rather than completing the task at hand (Edvardsson *et al.*, 2005). In this way, for example, it becomes more important to make the shower a pleasant experience rather than to accomplish it in the most time-efficient way (Sloane *et al.*, 2004). Consequently, flexibility of routines should be a key consideration in organizing, planning and executing care for people with dementia (Cohen-Mansfield and Bester, 2006).

Even though the literature consists mostly of explorative and observational studies on strategies for person-centered care, and narrative accounts regarding advantages and disadvantages, some outcome studies on the effects of person-centered care have emerged. A recent cluster randomized trial in which residential sites were randomly assigned to person-centered care, dementia care mapping, or usual care, showed that both person-centred care and dementia care mapping reduced agitation in people with dementia in residential care (Chenoweth *et al.*, 2009). Also, a randomized controlled trial using a person-centered intervention for showering and bathing residents with moderate to severe dementia found that discomfort, agitation and aggression for residents declined significantly in intervention groups compared with controls (Sloane *et al.*, 2004). In addition, the intervention significantly improved the experience of staff (measured by the use of gentleness, verbal support and staff perceptions of confidence and ease) when bathing residents (Hoeffer *et al.*, 2006). It has also been shown that, when all other variables were controlled for, significantly fewer neuroleptic medications were given to residents being cared for by staff who had received skills development and training in the delivery of person-centered care (Fossey *et al.*, 2006). Despite the obvious need for both more outcome studies and the replication of existing ones, provision of care that is person-centered should be the ethically responsible approach as it reflects more humanistic care with few reported risks (Edvardsson *et al.*, 2008). While waiting for conclusive knowledge about care efficacy, the burden of proof should fall on those who would advocate anything other that a person-centered approach to care provision.

To date there have been few measurement tools developed for the study of person-centered care and similar concepts, and those that exist have limitations and/or need further testing. Dementia care mapping has been used to assess person-centered dementia care (Brooker, 2005); however, the logic, applicability and usefulness of dementia care mapping as a research tool remains unclear (Chenoweth and Jeon, 2007; Sloane *et al.*, 2007). Other tools are not specific enough to measure person-centered care in facilities where people with dementia live, as they were developed to measure person-centered care in acute or sub-acute care facilities (e.g. Davis *et al.*, 2008: the Patient-Centred Inpatient Scale). A tool aiming to measure person-directed care was recently presented with promising results, but might prove too lengthy for clinical applicability and need further testing (White *et al.*, 2008: the Person-Directed Care Measurement Tool). Also, tools assessing the extent to which the climate of health care settings are person-centered (Edvardsson *et al.*, 2009: Person-Centered Climate Questionnaire) have recently been presented, but these have not been used and evaluated in the context of dementia care. Based on the literature, we identified a need for a short, cost- and time saving tool, easy to apply and complete, which could provide valid and reliable measurements of person-centered care in residential aged care settings for research purposes. The aim of the current study

https://doi.org/10.1017/S1041610209990688 Published online by Cambridge University Press

was to construct and evaluate the psychometric properties of the newly developed Person-centered Care Assessment Tool (P-CAT).

Methods

This study employed methods of scale construction to develop the tool and psychometric analyses to evaluate its validity and reliability. Within the construction phase, a 39-item pool was generated from research literature, expert consultations and research interviews with staff, people with dementia and family members. As a next step, the item pool was subjected to item analysis and reduction. Lastly, the dimensionality of the final pool was evaluated using exploratory factor analyses, and psychometric properties were assessed using statistical procedures for estimating validity and reliability. The research complies with the Helsinki Declaration and used implied consent – return of a questionnaire was regarded as proof of informed consent. The independent ethics committees of La Trobe University, Melbourne, Australia and the participating health organizations approved the study.

Phase 1: scale construction

The tool was developed through a rigorous iterative process. First, a review of the literature was undertaken with the objective of summarizing the current knowledge about person-centered care for people with dementia and highlighting areas in need of further research (Edvardsson *et al*., 2008). This resulted in a first draft of the tool consisting of 44 items that would measure person-centeredness. The original items were a combination of measures of actual practice in long-term aged care as well as staff attitudes and beliefs which either positively or negatively related to how they, and the culture of the facility, perceived a person living with dementia. Draft 1 of the tool was sent out to internationally recognized experts (n = 23) in aging, dementia and person-centered care for consultation and comments. Experts were contacted by email and asked to provide a critique on the preliminary item pool, especially on its content, format and scaling. Received comments included both specific suggestions about each item and general statements about the tool. Suggestions that were made by more than one expert were incorporated into a revision of the tool (Draft 2). Six focus groups were then conducted with staff working in long-term aged care facilities (n = 37); each of these focus groups comprised six participants except for one that had seven. Two focus groups, each of four participants, were conducted with people who had early onset dementia, had experienced respite care and who met regularly for social activities (n = 8). Face-to-face interviews were conducted with seven home carers of people with dementia; on three of these occasions the person with dementia for whom they cared was also interviewed. Phone or face-to-face interviews were conducted with 12 carers of people with dementia who lived in long-term aged care facilities. Carers and people with early onset dementia who took part in the interviews and focus groups responded to an advertisement in the newsletter of Alzheimer's Australia, Victoria inviting people to contact the researchers if they were interested in participating. The focus groups/interviews explored all the items on the draft tool and additional topics such as what the participants perceived person-centered care to be, the meaning of good or poor quality care in long-term facilities; and on what grounds a decision was made about which aged care facility was chosen as a place in which the person with dementia would live. The tool was revised again (Draft 3) to accommodate data from focus groups and interviews. Draft 3 of the tool was sent to another group of national and international experts (n = 12, some of whom had commented on Draft 1 of the tool) who were asked to rank the items out of 5 for relevance as a measure of person-centeredness and also to rate the wording of the items and provide revision suggestions for those items they saw as not being appropriately worded. The tool was revised (Draft 4) according to the results of the final consultation process, resulting in a final draft of 39 items. All items were formulated as statements about the presence of person-centeredness at the facility, and a 5-point Likert-type scale was used for scoring purposes (ranging from 1 = "Disagree completely" to 5 = "Agree completely").

Phase 2: psychometric evaluation

The final draft was distributed to ten long-term aged care facilities in Victoria, Australia in October 2008. A total of 1045 surveys were distributed. All staff employed at the facility were considered eligible for participation. The unit manager in each facility agreed to distribute questionnaires to all staff, and completed questionnaires were anonymously collected in a sealed box on site or sent directly to the principal investigator. A total number of 220 questionnaires were returned, representing a response rate of 21%. A sub-sample of 26 staff members participated in test-retest evaluation, thus completing the questionnaire twice with a week's interval in between.

Descriptive characteristics (means, standard deviation and frequencies) were calculated for each

https://doi.org/10.1017/S1041610209990688 Published online by Cambridge University Press

item in the tool. Validity of the P-CAT was evaluated by content and construct validity, and internal consistency reliability was examined using Cronbach's α coefficient and item-total correlation. Content validation was based on the previously described procedure of literature, stakeholder and expert consultation. Explorative factor analysis was performed to evaluate scale dimensionality and construct validity, and the criterion used to indicate an appropriateness of factor analysis in the sample was a Bartlett's test of sphericity of significance, and a Kaiser-Meyer-Olkin measure of sampling adequacy of ≥ 0.7. The criterion level for acceptable internal consistency reliability was set at $\alpha \geq 0.7$, and item-total correlations between 0.3 and 0.8 to ensure moderate correlation and avoid item redundancy. Test-retest reliability was examined through a single measures two-way mixed effects model intra-class correlation (ICC), the Pearson correlation coefficient (r), and the paired t-test (2-tailed, $p < 0.05$) to verify whether the means at test and retest differed. The criterion level for acceptable test-retest reliability was set at ICC ≥ 0.6, $r \geq 0.6$, and $p > 0.05$. SPSS version 14.0 was used in all statistical analyses.

Results

Sample characteristics

The sample (n = 220) consisted mostly of women (97%), with an average age ± standard deviation of 43 ± 10.7 years (range 18–67), reporting work experiences within aged care of 1–5 years (46%), 6–10 years (23%) and 11 years and more (31%). Participants had the following occupations: personal care workers (58%), enrolled nurses (16%), registered nurses (8%), unit managers (5%), and other (13%). Most of the participants (n = 183, 83%) worked at eight of the ten long-term aged care facilities operated by the same for-profit organization, and a minority (n = 38, 17%) were employed by two other for-profit aged care organizations.

Item analysis and reduction

No questionnaires were eliminated due to missing data; however, in eight cases missing data in single items were replaced by the mean score for that item. Bartlett's test of sphericity was significant (3527.0, $p < 0.01$) and Kaiser-Meyer-Olkin was satisfactory (0.87), thus a factor analysis model was deemed appropriate. Item reduction was thereafter performed using principal component analysis (PCA) with both varimax and oblimin rotation and the results compared. As the two rotations showed little difference, varimax rotation was retained. Kaiser's eigenvalue >1 criterion was used to decide on the number of factors to extract. The initial explorative PCA on the 39-item questionnaire resulted in an unstable ten-factor solution explaining 63% of the variance in data. To identify the strongest items and eliminate those that performed poorly, the following statistical criteria were used as cut-offs for item elimination: low factor loadings (< 0.4) or items loading moderate to high (>0.4) in multiple factors, and/or items with low item-total correlation (<0.3). As shown in Table 1, this stepwise item reduction technique resulted in a final 13-item pool in a stable three-factor rotated solution explaining about 56% of the total variance.

Scale dimensionality, construct and content validity

Conceptually, all factors showed coherent meanings and seemed internally consistent. The first factor comprised seven items (with loadings between 0.44 and 0.80), all concerned with the extent to which staff personalize the care provided to each resident. The first factor was therefore conceptualized as *extent of personalizing care*. The second factor consisted of four items (with loadings between 0.65 and 0.79). This factor was defined by the interpretation that all items related to the *amount of organizational support* perceived for providing person-centered care, and thus factor two was labeled as such. The third factor contained only two items (loadings between 0.51 and 0.52), which were related to environmental factors of person-centered care and were therefore conceptualized as *degree of environmental accessibility* (Table 1).

Construct validity was estimated as satisfactory as PCA separated the items into the stable three-factor solution explaining nearly 56% of the total variance in the sample. The content validity of the scale was regarded as satisfactory by experts as the scale was deemed to contain items reflecting the dimensions described in the literature as being central aspects of person-centeredness. In conclusion, estimates of content and construct validity for the English version of P-CAT indicates satisfactory psychometric properties of the scale. The questionnaire with its subscales, factor loadings, and Cronbach's α is presented in Table 1.

Internal consistency and test-retest reliability

The internal consistency coefficient (Cronbach's α) was satisfactory for the total scale (0.84), and for two of the three subscales (extent of personalizing care 0.81, and amount of organizational support 0.77). The third subscale, degree of environmental

https://doi.org/10.1017/S1041610209990688 Published online by Cambridge University Press

Table 1. Scale content, factor loadings, total variance explained and Cronbach's α for the final P-CAT (n = 220); loadings >0.4 included.

ITEM NUMBER	ITEM CONTENT	SUBSCALE 1 – EXTENT OF PERSONALIZING CARE	SUBSCALE 2 – AMOUNT OF ORGANIZATIONAL SUPPORT	SUBSCALE 3 – DEGREE OF ENVIRONMENTAL ACCESSIBILITY
1.	We often discuss how to give person-centered care.	0.66		
2.	We have formal team meetings to discuss residents' care.	0.78		
3.	The life history of the residents is formally used in the care plans we use	0.80		
4.	The quality of the interaction between staff and residents is more important than getting the tasks done.	0.44		
5.	We are free to alter work routines based on residents' preferences.	0.63		
6.	Residents are offered the opportunity to be involved in individualized everyday activities.	0.60		
7.	Assessment of residents' needs is undertaken on a daily basis.	0.68		
8.	I simply do not have the time to provide person-centered care.		0.65	
9.	The environment feels chaotic.		0.72	
10.	We have to get the work done before we can worry about a homelike environment.		0.79	
11.	This organization prevents me from providing person-centered care.		0.75	
12.	It is hard for residents in this facility to find their way around.			0.51
13.	Residents are able to access outside space as they wish.			0.52
Explained variance (%)	55.88%	35.72	11.73	8.43
Cronbach's α	0.84	0.81	0.77	0.31

accessibility, showed an α value of only 0.31. This value is interpreted as reflecting a smaller amount of variance among the respondents, and also a result of having merely two items constituting the factor. The item-total correlations of the final pool ranged between 0.31 and 0.63, indicating scale homogeneity. Table 2 shows the item performance for the final P-CAT.

With regard to retest reliability, all p values were greater than 0.05 in the paired t test. This indicates that there were no significant statistical differences between the mean scores at test and retest and supports the test-retest stability of the scale and its subscales. Analyses of test-retest data also show that all the r values of the P-CAT were between 0.7 and 0.9, which signifies that the tool and its subscales have a high concordance between test sessions. The two-way mixed effects model, single measures intra-class correlation was substantial and also supports test-retest reliability. Table 3 shows the p values for each subscale from the paired t tests between test and retest scores, the Pearson r ($p < 0.01$), and the intra-class correlation coefficients.

Discussion

The aim of this study was to construct and evaluate psychometric properties of the Person-centered Care Assessment Tool (P-CAT). The overall results of the study provided support for the psychometric properties of the scale when used in an Australian sample of long-term aged care staff. The tool is primarily intended for use as a research tool to measure the presence of person-centered care in residential aged care facilities as reported by staff.

https://doi.org/10.1017/S1041610209990688 Published online by Cambridge University Press

Table 2. Item performance for the final P-CAT (n = 220)

ITEM	MEAN	STANDARD DEVIATION.	CORRECTED ITEM-TOTAL CORRELATION	CRONBACH'S α IF ITEM DELETED
1	3.53	1.04	0.58	0.83
2	3.43	1.15	0.54	0.83
3	3.83	0.96	0.58	0.83
4	3.88	0.91	0.31	0.84
5	3.47	0.97	0.56	0.83
6	3.88	0.88	0.60	0.83
7	3.79	0.93	0.51	0.83
8	3.54	1.20	0.60	0.82
9	3.23	1.02	0.40	0.84
10	3.58	1.14	0–44	0.84
11	3.55	1.07	0.63	0.82
12	3.48	0.97	0.33	0.84
13	3.66	1.08	0.35	0.41

Table 3. Test-retest reliability measures for the P-CAT (n = 26)

SCALE DIMENSION	TEST MEAN ± SD	RETEST MEAN ± SD*	TEST–RETEST MEAN ± SD*	P	PEARSON R	INTRA-CLASS CORRELATION (CI)
Total score	2.53 ± 0.54	2.55 ± 0.60	−0.02 ± 0.47	0.83	0.66	0.66 (0.37–0.83)
Extent of personalizing care	2.31 ± 0.72	2.21 ± 0.68	0.09 ± 0.45	0.30	0.79	0.79 (0.59–0.90)
Amount of organizational support	2.81 ± 0.77	2.98 ± 0.92	−0.17 ± 0.78	0.27	0.58	0.58 (0.25–0.78)
Degree of environmental accessibility	2.48 ± 0.66	2.46 ± 0.88	0.02 ± 0.67	0.89	0.66	0.63 (0.33–0.81)

SD = standard deviation; CI: = confidence interval.

In terms of content, the dimensionality of the tool reflects the dimensions of person-centered care as described in previous literature. For example, the three first VIPS dimensions (Brooker, 2007) are captured through Subscale One, and valuing staff through Subscale Two, and the last, the social environment, is embraced in Subscale Three. In addition, Subscale One reflects three of the four dimensions of person-centered care as described by Edvardsson and colleagues (2008), namely *maintaining personhood*, *taking the patient's standpoint* and *acknowledging personal experience*. Also, the fourth dimension *social environment as a therapeutic agent* is embraced in Subscales Two and Three. The P-CAT also exceeds previous conceptualizations of person-centered care not only by capturing information about ongoing discussions about person-centered care (Item 1), but but also by evaluating whether discussions have been formalized (Item 2), and the extent to which person-centeredness has been operationalized and actually used in care practice (Item 3). The P-CAT can thereby assess whether staff report actual provision of person-centered care, or if it is merely rhetoric from the managing organization. It also highlights the extent to which the unit is bound by routines (Item 5), an aspect of significant importance for person-centered care (Cohen-Mansfield and Bester, 2006), and it evaluates the degree to which staff prioritize their relationship with patients rather than completing tasks (Item 4) – a central element in person-centered care (Sandman *et al.*, 2006). The P-CAT contributes to existing literature by explicating how elements of the organization (Subscale Two) and the environment (Subscale Three) can support or obstruct person-centered care. Thus, the tool makes it possible to undertake analyses of the relationship between organizational support, environmental accessibility and the extent to which care is personalized, by correlating the

https://doi.org/10.1017/S1041610209990688 Published online by Cambridge University Press

subscales. The succinct and concrete statements of the P-CAT make it a clinically applicable research tool, and it makes possible an exploration of person-centeredness in relation to health outcomes, organizational models, characteristics and levels of staffing, degrees of care needs among residents, and impact of interventions.

However, the study has limitations that warrant consideration. The findings represent initial testing. Further psychometric evaluation is needed and invited. The low response rate needs consideration. It is difficult to make any conclusive comments about non-respondents due to the anonymous returns procedure, but anecdotal remarks were made by managers at the participating long-term care facilities about the length of the tool (initially 39-items) and the fact that English was not the first language of many of their staff. Criterion-related validity was not possible to assess as a gold standard scale for the measurement of person-centered care in long-term aged care does not exist. Finally, Subscale Three failed to meet the reliability cut-off of 0.7 for Cronbach's α (0.31). This indicates that some questions remain regarding the dimensionality and internal consistency of this subscale. To conclude, the results are tentative and can be used as a starting point for comprehensively validating the P-CAT further. Additional testing and cross-validation of the findings with new samples are necessary for the process of establishing psychometric properties.

Conflict of interest

None.

Description of authors' roles

D. Edvardsson undertook the literature searches and the data analyses, edited all author contributions and had main responsibility for revisions and drafts of the manuscript. D. Fetherstonhaugh undertook the data collection, participated in the data analysis and contributed to revisions and final drafts of the manuscript. R. Nay contributed to revisions and final drafts of the manuscript. S. Gibson participated in data analysis and contributed to revisions and final drafts of the manuscript.

Acknowledgments

This project has been supported by the Swedish Research Council, Swedish Brain Power Project, Umeå University, La Trobe University, J. O. and J. R. Wicking Trust – Medical and Scientific Research Grants (ANZ Trustees), the Swedish Council for Working Life and Social Research and the Australian Government. The views expressed in this work are the views of its author/s and not necessarily those of the Australian Government.

References

Brooker, D. (2004). What is person-centered care in dementia? *Reviews in Clinical Gerontology*, 13, 215–222.

Brooker, D. (2005). Dementia care mapping: a review of the research literature. *Gerontologist*, 45, 11–18.

Brooker, D. (2007). *Person Centered Dementia Care: Making Services Better*. London: Jessica Kingsley.

Chenoweth, L. and Jeon, Y. (2007). Determining the efficacy of dementia care mapping as an outcome measure and a process for change: a pilot study. *Aging and Mental Health*, 11, 237–245.

Chenoweth, L., King, M. T., Jeon, Y. H. *et al.* (2009). Caring for Aged Dementia Care Resident Study (CADRES) of person-centred care, dementia-care mapping, and usual care in dementia: a cluster-randomised trial. *Lancet Neurology*, 8, 317–325

Clarke, A. (2000). Using biography to enhance the nursing care of older people. *British Journal of Nursing*, 9, 429–433.

Clarke, A., Hanson, E. J., and Ross, H. (2003). Seeing the person behind the patient: enhancing the care of older people using a biographical approach. *Journal of Clinical Nursing*, 12, 797–706.

Cohen-Mansfield, J. and Bester, A. (2006). Flexibility as a management principle in dementia care: the Adards example. *Gerontologist*, 46, 540–544.

Davis, S., Byers, S., and Walsh, F. (2008). Measuring person-centered care in a sub-acute health care setting. *Australian Health Review*, 32, 496–504.

Downs, M., Small, N. and Froggatt, K. (2006). Person-centered care for people with severe dementia. In A. Burns and B. Winblad (eds.), *Severe Dementia*. (pp 193–204). Chichester: Wiley.

Edvardsson, D., Sandman, P. O. and Rasmussen, B. (2005). Sensing an atmosphere of ease – a tentative theory of supportive care settings. *Scandinavian Journal of Caring Sciences*, 19, 344–353.

Edvardsson, D., Winblad, B. and Sandman, P. O. (2008). Person-centered care for people with severe Alzheimer's disease: current status and ways forward. *Lancet Neurology*, 7, 362–367.

Edvardsson, D., Koch, S. and Nay, R. (2009). Psychometric evaluation of the English version Person-Centered Climate Questionnaire – Patient version. *Western Journal of Nursing Research*, 31, 235–244.

Ericson, I. *et al.* (2001). What constitutes good care for people with dementia? *British Journal of Nursing*, 10, 710–714.

Fossey, J. *et al.* (2006). Effect of enhanced psychosocial care on antipsychotic use in nursing home residents with severe dementia: cluster randomized trial. *BMJ*, 332, 756–761.

https://doi.org/10.1017/S1041610209990688 Published online by Cambridge University Press

Hoeffer, B. *et al.* (2006). Assisting cognitively impaired nursing home residents with bathing: effects of two bathing interventions on caregiving. *Gerontologist*, 46,524–532.

Kitwood, T. (1997). *Dementia Reconsidered: The Person Comes First*. Buckingham: Open University Press.

Kontos, P. C. (2005). Embodied selfhood in Alzheimer's disease: rethinking person-centered care. *Dementia*, 4, 553–570.

McCormack, B. (2004). Person-centeredness in gerontological nursing: an overview of the literature. *International Journal of Older People Nursing*, 13, 31–38.

Murphy, K. (2007). Nurses' perceptions of quality and the factors that affect quality care for older people living in long-term care settings in Ireland. *Journal of Clinical Nursing*, 16, 873–884.

Neal, M. and Barton Wright, P. (1999). Validation therapy for dementia. *Cochrane Database of Systematic Reviews*, 1.

Norberg, A. (1998). Interaction with people suffering severe dementia. In A. Wimo, B. Jönsson, G. Karlsson and B. Winblad (eds.), *Health Economics of Dementia (*pp 113–121). Chichester: Wiley.

Rogers, C. (1961). *On Becoming A Person: A Therapist's View of Psychotherapy*. London: Constable.

Sandman, P. O., Edvardsson, D. and Winblad, B. (2006). Care of patients in the severe stage of dementia. In S. Gauthier (ed.), *Clinical Diagnosis and Management of Alzheimer's Disease* (pp 233–246). London: Taylor & Francis.

Slater, L. (2006). Person-centeredness: a concept analysis. *Contemporary Nurse*, 23, 135–144.

Sloane, P. D. *et al.* (2004). Effects of person-centered showering and the towel bath on bathing associated aggression, agitation, and discomfort in nursing home residents with dementia: a randomized, controlled trial. *Journal of the American Geriatrics Society*, 52, 1795–1804.

Sloane, P. D. *et al.* (2007). Dementia care mapping as a research tool. *International Journal of Geriatric Psychiatry*, 22, 580–589.

White, D. L., Newton-Curtis, L. and Lyons, K. S. (2008). Development and initial testing of a measure of person-directed care. *Gerontologist*, 48, 114–123.

https://doi.org/10.1017/S1041610209990688 Published online by Cambridge University Press