

# Measuring Person-centered Care: A Critical Comparative Review of Published Tools

David Edvardsson, PhD,<sup>\*,1,2</sup> and Anthea Innes, BA (Hons), MSc, PhD<sup>3</sup>

<sup>1</sup>Department of Nursing, University of Umea, Sweden.

<sup>2</sup>Australian Centre for Evidence Based Aged Care, La Trobe University, Bundoora Victoria, Australia.

<sup>3</sup>Department of Applied Social Science, Dementia Services Development Centre, University of Stirling, UK.

\*Address correspondence to David Edvardsson, PhD, Department of Nursing, University of Umea, S-901 87 Umea, Sweden.  
E-mail: david.edvardsson@nurs.umu.se

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**Purpose of the study:** To present a critical comparative review of published tools measuring the person-centeredness of care for older people and people with dementia. **Design and Methods:** Included tools were identified by searches of PubMed, Cinahl, the Bradford Dementia Group database, and authors' files. The terms "Person-centered," "Patient-centered" and "individualized" (US and UK spelling), were paired with "Alzheimer's disease," "older people," and "dementia" in various combinations. The tools were compared in terms of conceptual influences, perspectives studied and intended use, applicability, psychometric properties, and credibility. **Results:** Twelve tools eligible for review were identified. Eight tools were developed for evaluating long-term aged care, three for hospital-based care, and one for home care. One tool, Dementia Care Mapping, was dementia specific. A common limitation of the tools reviewed is that they are yet to be used and validated beyond the development period; thus, their validity, reliability, and applicability needs further exploration. Also, the perspective of people with dementia remains absent. **Implications:** The review demonstrates the availability of a multitude of tools for measurement of person-centered care in different settings and from different perspectives, even if further testing of the tools is needed. The conceptual underpinnings of the tools are rarely explicit, which makes it difficult to ascertain the conceptual comparability of the tools.

**Key Words:** *Person centered, Dementia, Research instruments*

The purpose of this article is to present a critical comparative review of published tools designed to provide measurements of the person-centeredness of care for older people and people with dementia. Such a review is lacking in contemporary literature even though theoretical and conceptual approaches to humanistic, person-centered dementia care have evolved since the 1980s.

## Background

Theoretical and conceptual contributions outlining care that would most benefit those with a dementia diagnosis emerged, in part, from critique of biomedical conceptualizations of dementia (Bond, 1992; Lyman, 1989). Such conceptualizations portrayed dementia as a condition where deterioration and decline were inevitable, and thus little could be achieved for people with dementia other than the basics of keeping individuals warm, clothed, clean, and fed. Social psychologists challenged this position by arguing that if a humanistic approach to care (Rogers, 1961) was adopted, then there was much that carers of people with dementia could do to support the person throughout their experiences of living with dementia (Kitwood, 1997; Sabat, 2001).

Kitwood (1993) went on to propose that caregiving for a person with dementia requires more than common sense and must involve some understanding of the experience of people with dementia. In the last decade, there has been a core of consensus that person-centered care

involves valuing and using people's subjective experience of illness regardless of cognitive ability, and acknowledging that the person should be the focus of care delivery and not the disease or illness (Brooker, 2004; Cowdell, 2006; Edvardsson, Winblad, & Sandman, 2008; McCormack, 2004; Penrod et al., 2007).

### *Measuring Person-Centered Care*

To date, a common approach in studies of person-centered interventions in dementia has been to use outcome measures as proxy descriptors of person-centeredness. For example, the prevalence of behavioral and psychological symptoms of dementia (BPSD), use of neuroleptic medications, and/or quality of life has been used. This approach reflects the logic that the intervention has succeeded (higher degrees of person-centeredness) if the outcome measures are affected in the desired direction, for example, fewer BPSD, decreased usage of neuroleptic medications, or increased quality of life. For example, a randomized controlled trial was conducted where a person-centered intervention for bathing and showering people with moderate to severe dementia was compared with standard procedures. The study found that indicators of resident discomfort, agitation, and aggression declined significantly in the intervention groups but not in controls (Sloane et al., 2004). In addition, it was found that staff in the intervention groups significantly improved in their use of gentleness and verbal support when bathing residents, and that they also reported increased perception of ease connected to bathing and showering postintervention. This was interpreted as evidence that the person-centered intervention improved the person-centeredness of staff (Hoeffler et al., 2006). Another example of a proxy-based measure of the effects of person-centered interventions in dementia care can be found in a report of a cluster randomized trial (Fossey et al., 2006). A staff intervention consisting of skills development and training in delivering person-centered care resulted in the provision of significantly fewer neuroleptic medications without significantly different levels of symptom presentation (Fossey et al.). In a recent article, a cluster randomized controlled trial was performed in dementia care settings, where two interventions were included, one person-centered care intervention and one using Dementia Care Mapping (DCM). In common with the findings of the above studies, evidence of increased person-centeredness

was interpreted by a proxy if, for example, agitation was reduced, which was also the case. Thus, person-centeredness was not measured per se (Chenoweth et al., 2009).

### *Person-Centered, Patient-Centered or Individualized Care—A Conceptual Multiplicity*

There are a range of terms in the literature describing care that is personalized and tailored to meet each care recipient's needs and preferences. Each has a similar philosophy or approach to care practice. Person-centered care has widespread usage in the dementia care field in the UK and beyond. This is, in part, due to the continuing popularity of Kitwood's (1997) conceptualizations of person-centered care with the key focus of preserving the personhood of individuals with dementia. Brooker (2004) presented four key components of person-centered dementia care: valuing people with dementia and those that care for them; treating people as individuals; looking at the world from the perspective of the person with dementia; and providing a positive social environment to facilitate well-being. Furthermore, McCormack (2004) provided a theoretical account of the key aspects of person-centered gerontological nursing: being in relation (social relationships); being in a social world (biography and relationships); being in place (environmental conditions); and being with self (individual values). It has also been suggested that person-centered care is useful as a philosophy to design and deliver clinical care as it shows respectful, humanitarian, and ethical values that should be of benefit to those with dementia; however, further evidence is needed (Edvardsson, Winblad, et al., 2008).

Patient-centered or patient-focused care is a similar term emerging in hospital care-orientated literature (e.g., Dayton, Canter, & Allen, 2003) to describe care that places the focus on the person with the diagnosis. In this way, person-centered and patient-centered or patient-focused conceptualizations share a concern to place the person with dementia at the center of the care dynamic rather than to place emphasis on the condition a person may have. Individualized care is another popular related term used in hospital care literature to describe care that reflects the uniqueness and individuality of each care recipient. Furthermore, client-centered care is an additional concept used in service provider literature (e.g., De Witte, Schoot & Proot, 2006; Page, 2007) to look at the needs of

the person in receipt of services rather than to focus on the services that are available or the condition. Even though these concepts stem from different traditions and/or disciplines, they share a fundamental focus on the person rather than the disease and are therefore relevant to this review.

## Design and Methods

References for tools to be included in the review were identified by searches of PubMed (1966 onwards), and Cinahl (1982 onwards). The terms “Person-centered,” “Patient-centered,” and “individualized” (using both US and UK spelling), were paired with “Alzheimer’s disease,” and “dementia” and entered in various combinations. Articles were also identified from relevant articles from the authors’ files. Bradford Dementia Group’s database was also used to identify articles for inclusion. For inclusion, articles had to be published in English, and describe tools relating to person-centered care for older people or people with Alzheimer’s disease and related dementias. The tools were compared in terms of conceptual influences, perspectives studied and intended use, applicability, psychometric properties, and credibility. The presentation of the tools reviewed is organized according to the setting they aimed to assess (long-term dementia and aged care, hospital settings, and home care).

## Results

The structured literature searches revealed 12 tools eligible for review. Each tool explicitly aimed to measure forms of person-centered care as perceived by care recipients, family members, or staff. One dementia-specific tool was found. The other 11 included in this review did not explicitly denote a dementia focus or any other diagnostic target group. Table 1 provides a descriptive overview of the tools identified for review.

### *Presentation and Analysis of the Tools Reviewed*

The literature searches identified 12 tools measuring person-centered care. One tool was designed for use in dementia care settings, seven tools were designed for use in long-term aged care, three tools were designed to focus on older people in hospital care, and one tool identified focused on older people receiving home care. The presentation of tools follows this logic: First, the tools developed in long-term aged care and dementia are presented

( $n = 8$ ); second, the tools developed in hospital settings are presented ( $n = 3$ ); and lastly, the tool developed in home-based care is presented ( $n = 1$ ).

### *Long-term Aged Care and Dementia Settings*

*Dementia Care Mapping.*—DCM is an observational tool that uses four predetermined coding frames that aim to make the observer view the world from the point of view of the person with dementia. Coding frames of DCMs are as follows: mood enhancers (6-item scale); behavior categories (23 items); personal detractions (PD) and personal enhancers (PE; both with 17 items divided into five categories). Items are rated on a 2-point scale ranging between “detracting” and “highly detracting” for PD and “enhancing” and “highly enhancing” for PE. DCM was developed through a systematic process of item development (Table 1). It has been argued that the strength of the tool is that, it “. . . may come closer to viewing QOL from the perspective of the person with dementia than many other available measures” (Sloane et al., 2007), and that it has widespread clinical appeal and is extensively used in dementia care practice. The weaknesses of DCM lie in the time-consuming nature of the method (Fossey, Lee, & Ballard, 2002; Sloane et al.; Thornton, Hatton, & Tatham, 2004) and questions about its cost-effectiveness (Chenoweth et al., 2009). In addition, concerns about the reliability of DCM and its coding frames have been raised (Chenoweth & Jeon, 2007; Sloane et al.; Thornton et al., 2004). It has been suggested that an abbreviated version of the tool would be a positive way forward to reduce the time demands DCM places on the user (Fossey et al., 2002; Sloane et al.). Another difficulty with DCM relates to it being a commercial product with restricted availability unless courses are paid for and attended.

*The Person-Directed Care Measure.*—A measure of person-directed care (PDC) of older people in long-term care settings where staff are asked to rate to what extent the care provided is person directed was recently presented (White, Newton-Curtis, & Lyons, 2008). The tool consists of 50 items covering eight domains of person-centered care and is divided into two dimensions: PDC and person-directed environment (Table 1). The tool was developed through a systematic procedure of item generation and selection based on theory and

Table 1. Descriptive Overview of Tools Identified for Review

Tool	Aim of tool	Development and content	Conceptual domain representation	Validity and reliability	References
Dementia Care Mapping 8th edition (DCM8)	Observing people with dementia living in formal care settings, driving development of person-centered care practice	Currently in 8th edition. Developed over a 3-year period from the previous version DCM7. Began with "think tank" of 33 experts in 2001 followed by series of eight international working groups, and piloted in 4 care organizations in the UK, with additional piloting Consists of four coding frames: mood enhancers (6 item scale); behaviour categories (23 items); personal detractions (PD) and personal enhancers (PE) (both contain 17 items, divided into five categories. Items are rated on a 2-point scale ranging between detracting and highly detracting for PDs and enhancing and highly enhancing for PEs	Kitwood's general approach of person-centered care central, concepts of personhood, malignant social psychology, positive person work	Validity and reliability of DCM8 discussed in relation to the discussions of validity and reliability in published literature based on 7th version of the method  Advocate an interrater reliability of approximately 70%	Brooker & Surr (2005)
The person-directed care measure	Evaluating to what extent settings meet person-directed care goals	Expert generation of items, adding items from literature, two dimensions: person-directed care, and person-directed environment	Personhood, autonomy/choice, knowing the person, comfort, nurturing relationships, physical and organizational environment	First dimension: Construct validity estimated in five factors explaining 61% of total variance, all factors having Cronbach's alpha of >0.85	White et al. (2008)

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Table 1 (continued)

Tool	Aim of tool	Development and content	Conceptual domain representation	Validity and reliability	References
		Contains 50 items in eight subscales: knowing the person, comfort care, autonomy, personhood, support relations, work with residents, personal environment, management		Second dimension: Construct validity estimated in three factors explaining 60% of total variance, all factors having Cronbach's alpha of >0.73	
		Scoring on a 5-point Likert scale ranging from rarely or none of the time, to all or almost all of the time		Discriminates between settings, disciplines and staff levels	
The person-centered care assessment tool	Measuring to what extent long-term aged care staff rate care as being person centered	Item generation from experts, literature, and qualitative study of staff, people with dementia and family members	Personalization, organizational support, environmental accessibility	Estimated content validity by experts, literature reviews, and stakeholders	Edvardsson, Fetherstromhaugh, et al. (2010)
		Contains 13 items in three subscales: Personalizing care, organizational support, environmental accessibility		Construct validity estimated in three factors explaining 56% of total variance Cronbach's alpha of total scale: 0.84, and of subscales: 0.81, 0.77, and 0.31, respectively Item-total correlations ranging between 0.31 and 0.63 Test-retest reliability: Pearson's <i>r</i> of 0.7.	
Measures of individualized care	Measuring individualized care of people with dementia in long-term care facilities	Scoring on a 5-point Likert scale ranging from disagree completely to agree completely Item generation from literature review, expert consultation and direct observations	Knowing the person, autonomy, and communication	Estimated content validity from experts, literature reviews, and direct observations	Chappell et al. (2007)

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Table 1 (continued)

Tool	Aim of tool	Development and content	Conceptual domain representation	Validity and reliability	References
Family involvement in care	Measuring family perceived involvement in care of people with dementia in long-term care facilities	Three domains of individualized care was operationalized into three independent tools, knowing the person, autonomy, and communication		Construct validity estimated in factor structure of the tools, each presenting one factor explaining 29%, 31%, and 33% of total variance, respectively.	Reid et al. (2007)
		Knowing the person is scored on a 4-point Likert scale ranging between strongly disagree and strongly agree		Cronbach's alpha of the three scales: 0.77, 0.80, and 0.64, respectively	
		Autonomy is scored on a 5-point Likert scale ranging between very frequently and never		Test-retest reliability: Pearson's $r$ of 0.6, 0.88, and 0.77, respectively	
		Communication is scored on a 5-point Likert scale ranging between never and always			
		Item generation from literature review, expert consultation, facility observations	Involvement of family	Estimated content validity from experts, literature reviews, and facility observations	
		Two dimensions of family involvement care were operationalized into two independent tools, family perceived involvement; and the importance attached to family involvement		Construct validity estimated in factor structure of the tools, family involvement presented one interpretable factor explaining 44%, of total variance. Perceived importance presented two interpretable factors explaining 30% of total variance	
		Family involvement is scored on a 4-point Likert scale ranging between strongly disagree and strongly agree		Cronbach's alpha of family involvement: 0.93, and of perceived importance: 0.85	

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Table 1 (continued)

Tool	Aim of tool	Development and content	Conceptual domain representation	Validity and reliability	References
The English language person-centered climate questionnaire—patient version	Assessing to what extent the climate of health care settings is perceived by patients as being person centered	Perceived importance is scored on a 4-point Likert scale ranging between unimportant and <i>Extremely important</i> Item generation from qualitative studies, cyclic process of translation/back translation from Swedish to English	Competency of staff, personalizing care, personalizing the environment, having choices	Test–retest reliability: Family involvement: Pearson's <i>r</i> of 0.9, and perceived importance: 0.9 Estimated content validity from experts, literature reviews, and hospital care recipients	Edvardsson, Koch, et al. (2009)
		Contains 17 items in two subscales: safety, and hospitality Scoring on a 5-point Likert scale ranging from no, I disagree completely, to yes I agree completely		Construct validity estimated in two factors explaining 65% of total variance Cronbach's alpha of total scale: 0.90, and of subscales: 0.96, 0.89 Item–total correlations ranging between 0.37 and 0.80	
The English language person-centered climate questionnaire—staff version	Assessing to what extent the climate of health care settings is perceived by patients as being person-centered	Item generation from qualitative studies, cyclic process of translation/back translation from Swedish to English yes I agree completely	Competency of staff, personalizing care, personalizing the environment, having choices, involvement of significant others	Test–retest reliability: Intraclass correlation of 0.7 Estimated content validity from experts, and literature reviews	Edvardsson, Koch, et al. (2010)
				Construct validity estimated in four factors explaining 72% of total variance Cronbach's alpha of total scale: 0.89, and of subscales: 0.87, 0.79, 0.82, and 0.69, respectively	

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Table 1 (continued)

Tool	Aim of tool	Development and content	Conceptual domain representation	Validity and reliability	References
The person-centered inpatient scale	Measuring patient perceptions of person-centered care	Contains 14 items in four subscales: safety, everydayness, community, and comprehensibility	Personalization, empowerment, respectfulness, staff availability	Item-total correlations ranging between 0.24 and 0.71	Coyle and Williams (2001)
		Scoring on a 5-point Likert scale ranging from no, I disagree completely, to yes, I agree completely		Test-retest reliability: Intraclass correlation of 0.8	
The client-centered care questionnaire	Evaluating the client-centredness of professional home nursing care from a client perspective	Contains 20 items in five dimensions: personalization, empowerment, information, approachability/availability, respectfulness	Recognizing personhood, respecting personhood, respecting autonomy	Validity and reliability testing not presented	De Witte et al. (2006)
		Scoring on a 5-point Likert scale ranging from strongly disagree to strongly agree		Estimated content validity by experienced nurses and clients, pilot tested in six home care clients	
		Contains 15 items in one dimension, client-centered care		Construct validity estimated in one factor explaining 58% of total variance	
		Scoring on a 5-point Likert scale ranging from totally disagree to totally agree		Cronbach's alpha of total scale: 0.94	



statistical analyses from a sample of aged care staff ( $n = 430$ ) in the United States. The final tool showed satisfactory estimates of construct validity and internal consistency. The main strength of the tool is that many items are concrete and focus on aspects that can be meaningful for residents (e.g., how many residents can participate in recreational activities that match their interests, how often staff keep residents connected to previous activities, whether they help them spend time with people they like, and whether or not residents have interesting things to do throughout the day). In this way, the tool can help to illuminate the extent of staff knowledge of residents, and the relationships and activities that are meaningful for the person. The weaknesses of the tool involve the two dimensions developed and whether these are to be scored and interpreted autonomously or can be seen as composing one scale. In addition, estimates of test–retest reliability were not discussed and publications describing tool application beyond the development study are yet to be presented.

*The Person-Centered Care Assessment Tool.*—The person-centered care assessment tool (P-CAT) is another recent approach used to measure person-centeredness as perceived by staff members in long-term aged care settings (Edvardsson, Fetherstonhaugh, Gibson, & Nay, 2010). The tool consists of 13 items in three subscales: personalizing care, organizational support, and environmental accessibility. The tool was developed from a qualitative study into the content and meaning of person-centered care as experienced by a sample of Australian aged care staff, people with dementia, and family members ( $n = 67$ ). The preliminary tool was distributed to another sample of aged care staff ( $n = 220$ ) and underwent a systematic process of item reduction and psychometric testing that indicated satisfactory estimates of validity and reliability (Table 1). The strength of the tool is that it is short, concrete, and covers central areas of person-centered care such as the content of care, the organization, and the environment. Weaknesses relate to the limited response rate of 21% in the development study, and some questions relating to the dimensionality of the tool remain as one of the three subscales failed to meet the a priori stated Cronbach's alpha cutoff (0.7).

*Measures of Individualized Care.*—Three tools for measuring long-term aged care staff percep-

tions of individualized care have recently been presented (Chappell, Reid, & Gish, 2007). Each tool was developed and tested with the same sample of staff in long-term aged care. The first tool operationalizes the domain “knowing the person” in 13 items. The second tool operationalizes “resident autonomy” in 15 items, and the third tool measures “communication” through 18 items. The three tools were developed using a systematic item generation and deletion process, and they all demonstrate satisfactory estimates of validity and reliability (Table 1). A recent study examining the psychometric properties of the tools supports satisfactory estimates of validity and reliability (O'Rourke, Chappell, & Caspar, 2009). The strengths of all three tools are their clinical relevance, and they are short and easy to complete, while using concrete language. In addition, the psychometric properties are satisfactory. The weaknesses of the tools relate to the limited sample size ( $n = 58$ ) in the development study, and restricted instructions about how to score and compare responses between the tools.

This research group also presented two measures of family involvement in the care of a relative with dementia in a long-term care setting (Reid, Chappell, & Gish, 2007). The first measure consists of 20 items measuring to what extent family members perceive they are involved in the care of their relative. The second measure consists of 18 items that measure the importance attached to being involved in the care of the relative living in long-term care. Both tools were developed through a systematic item generation and deletion process, and both present satisfactory estimates of validity and reliability (Table 1). However, the sample size for the family involvement scales was small ( $n = 68$ ), and the scales have not yet been further applied beyond the development study, and thus are yet to appear in peer-reviewed journals.

### *Hospital Settings*

*The Person-Centered Climate Questionnaire—staff and patient versions.*—Edvardsson and colleagues have developed two tools that aim to measure to what extent the psychosocial environment of health care settings is perceived to be person centered; the person-centered climate questionnaire (PCQ)—staff and patient versions. The staff tool contains 14 items in four subscales: safety, everydayness, community, and comprehensibility (Edvardsson, Koch, & Nay, 2010). The

patient tool contains 17 items in two subscales: safety and hospitality (Edvardsson, Koch, & Nay, 2009). Both tools were developed based on findings from a qualitative study exploring the meaning of the psychosocial environment for patients and staff. The tools then underwent initial testing and reduction with a Swedish sample of health care staff ( $n = 600$ ) and care recipients ( $n = 544$ ); (Edvardsson, Sandman, & Rasmussen, 2008; Edvardsson, Sandman, & Rasmussen, 2009). The staff and recipient versions were translated into English and tested in an Australian sample of day surgery care staff ( $n = 108$ ) and recipients ( $n = 52$ ). Satisfactory estimates of validity and reliability were presented for both the staff and recipient version of the scale (Table 1). The tools' strengths are that they are short, concrete, and based on interviews with older people receiving hospital care. However, the studies had limited samples ( $n = 52$  for the English staff version, and  $n = 108$  for the English patient version), with limited response rates (66% and 29%, respectively), and it remains unclear to what extent the tools can be applied to settings other than acute care.

*The Person-Centered Inpatient Scale.*—Coyle and Williams (2001) developed a tool to assess person-centeredness in health care and tested it with a sample of hospital health care recipients ( $n = 97$ ). The tool measures recipient experiences of care and contains 20 items in five dimensions: personalization, empowerment, information, approachability/availability, and respectfulness. The utility of the tool was studied in an Australian sample of older patients in subacute care ( $n = 78$ ). An ability to detect variation in frequency scores of the items was found, even though validity or reliability estimates were not presented (Davis, Byers, & Walsh, 2008). Strengths of the tool relate to it being short and concrete, and applicable to various settings. Potential weaknesses include unclear psychometric properties as estimates of validity and reliability are yet to be presented. Also, it cannot be ascertained if and how a systematic procedure guided by theory and statistics aided in the item selection process. Thus, the tool would benefit from further exploration.

#### *Home-care Settings*

*The Client-Centered Care Questionnaire.*—The concept of client-centered care has been operationalized into a 15-item questionnaire measuring to what extent older people receiving home care experience

the care as being client centered (De Witte et al., 2006). The questionnaire was developed from a qualitative study about client perspectives on client-centered care and staff competencies needed to provide client-centered care. The resulting questionnaire was pilot tested in home care clients ( $n = 6$ ), and following minor revision, it was tested with another sample of clients ( $n = 107$ ) receiving home care. Content and construct valid, with satisfactory internal consistency was reported (Table 1). The strengths of the tool lie in its brevity and usability, it was also rigorously developed and it embraces theoretical understandings of person-centered care. On the negative side, estimates of item-total correlation and test-retest reliability were not presented and thus questions remain regarding the psychometric properties of the tool. Also, the instrument was tested with a limited sample with a high mean age who appear to have intact cognitive status. Thus, questions such as the stability of the instrument over time, issues of homogeneity, and applicability of the questionnaire in long-term and dementia care settings have yet to be explored.

#### *Comparative Analysis and Discussion*

There are five distinct comparisons that can be made of the tools reviewed: conceptual influences, perspectives studied and intended use, applicability, psychometric properties, and credibility.

#### *Conceptual Influences*

The conceptual underpinnings of the tools need consideration in relation to the wider application of the tools. The conceptual multitude is a reflection, at least in part, of the levity of different conceptual language in different care settings. For example, person-centered care seems to be common parlance for practitioners, policy makers, and researchers within aged care, whereas individualized care seems to be more often used within more acute care settings. Although the tools reviewed seem to draw on similar conceptual principles and care ethos, this is rarely explicit in the tool presentation and this makes it difficult to ascertain the conceptual comparability of the tools. For example, DCM uses the terms “personal enhancers” and “personal detractors” in two coding frames that are targeted at the individual experiences as recorded by an observer (Brooker & Surr, 2005), whereas the P-CAT (Edvardsson, Fetherstonhaugh, et al., 2010) uses three subscales that look at more holistic/macrolevel

indicators of person-centered care, namely, personalizing care, organizational support, and environmental accessibility. Thus, the focus can be at the individual microlevel of staff–resident interactions, or conversely in a way that brings together the micro- and macrolevels together. The latter is preferable in that a holistic picture could emerge with the possibility of examining the interplay between different factors on person-centered care. The former would be preferable if the aim is to change the experience of dementia care for one individual (or small group of residents) and as such their experiences (as decided by an observer), but it does not address the wider principles of person-centered care outlined above by Brooker (2004), McCormack (2004), and Edvardsson, Winblad, et al. (2008).

### *Perspectives Studied and Intended Use*

The tools also vary in the perspectives studied, including care staff (Chappell et al., 2007; Edvardsson, Koch, et al., 2010; Edvardsson, Fetherstonhaugh, et al., 2010; White et al., 2008), family caregivers (Reid et al., 2007), and cognitively unimpaired care recipients (Coyle & Williams 2001; De Witte et al., 2006; Edvardsson, Koch, et al., 2009). This reflects a growing move toward engaging with the range of key stakeholders involved in dementia care, both care recipients and caregivers. All the tools, with the exception of DCM, were designed with the intention of research use. In part, this reflects the historical context of dementia research and a concern to robustly measure and test if care practices and interventions are beneficial. By contrast, DCM was initially developed to help evaluate care in a practice development context (Capstick, 2003). Over time, DCM has been used as an instrument to evaluate the impact of an intervention, to evaluate care, and as both an intervention and measure of outcome. The latter presents problems in that if a tool is to be used as a research outcome measure, to use it also as the intervention to bring about change, means that the technique/process is the same as the outcome. The strength of the other tools reviewed is their attempt to actively create a research instrument that is psychometrically sound, for use in empirical enquiry that will provide a quantifiable measure of person-centeredness, or quality of care provision.

### *Applicability*

The tools demonstrate different clinical applicability when it comes to the time it would take to

use each tool for practice development or for research purposes. DCM, for example, is cumbersome in that a minimum of a 2-day course is required to learn about the tool, followed by time-consuming data collection. The other tools are more compact in their presentation enabling a researcher to learn and elect to use a tool from a perusal of the published literature. The time taken to use the other tools is also less as these tools have evolved to be streamlined and targeted at key areas that can measure person-centeredness. However, the applicability of the more research-oriented tools for practice development purposes remains unclear, whereas DCM shows high applicability for practice development. In addition, as the tools reviewed have been developed for use in different care contexts, for example, long-term care homes (Chappell et al., 2007; Edvardsson, Fetherstonhaugh, et al., 2010; Reid et al., 2007; White et al., 2008), hospitals (Coyle & Williams 2001; Edvardsson, Koch, et al., 2009; Edvardsson, Koch, et al., 2010), and home care settings (De Witte et al., 2006), further application of these must take account of the type of setting where the tool was developed. Until tools developed for use in one setting are used and tested in other settings, their wider applicability remains open to empirical enquiry.

### *Psychometric Properties*

A common limitation of the tools reviewed (Chappell et al., 2007; De Witte et al., 2006; Edvardsson, Fetherstonhaugh, et al., 2010; Reid et al., 2007; White et al., 2008) is that they are yet to be used and validated beyond the development period, which means that their validity, reliability, and applicability needs further exploration. A common strength of several tools reviewed is that they have been developed using systematic and rigorous processes, and preliminary psychometric evaluations show promising results (Chappell et al., 2007; Edvardsson, Fetherstonhaugh, et al., 2010; Edvardsson, Koch, et al., 2009; Edvardsson, Koch, et al., 2010; Reid et al., 2007; White et al.). Person-centered inpatient scale (PCIS) of Coyle and Williams (2002) did not discuss issues of reliability and validity, and therefore the robustness of the tool for research purposes is open to question. When it comes to DCM, concerns have been raised by researchers about the psychometric properties of the tool's coding frames (Fossey et al., 2006; Sloane et al., 2007) and thus the psychometric properties of DCM remains unclear. The research

community would benefit from further psychometric estimates of all these tools from additional samples and contexts.

### Credibility

The established credibility of the 12 tools reviewed varies considerably. This is due, in part, to the very recent development and availability of many of the tools (Chappell et al., 2007; Edvardsson, Koch, et al., 2010; Edvardsson, Fetherstonhaugh, et al., 2010; Reid et al., 2007; White et al., 2008). The lack of wider application of these tools since their development means that it is too early to tell how credible other researchers will find them. DCM has established credibility as a practice development tool and is the tool that has been available the longest. DCM has been mentioned in UK reports (National Audit Office 2010, p. 23) as a possible method to use to help evaluate dementia care. This supports the credibility of the tool, and perhaps also a previous lack of alternative and established tools.

### Conclusions

Our critical comparative review of tools that are used in research seeking to measure the reality of the much used and morally attractive ethos of person- or patient-centered, or individualized care reveals a long history of the attractiveness of the ethos or philosophy, but a shorter history of researchers seeking to actively produce instruments that can measure the application of the theory in practice. We have demonstrated a growing number of innovative, useable, psychometrically robust tools; however, a limitation of this body of research is that most of the tools (with the exception of DCM, PCQ, measures of individualized care, and PCIS) have not been used in actual research since the development period. In light of the commonly posed argument that person-centered care represents best practice in the care of older people and people with dementia, the emergence of measures for empirical studies of person-centered care is a welcome addition to the literature. These tools can be used to further explore if and to what extent this form of care actually improves and/or correlates with desirable health outcomes for older people and people with dementia and their family members. Thus, it is timely to move from proxy to direct measures of person-centered care in research, even if further application and testing of these tools

is needed. As there are a range of tools to select from, the most appropriate one should be selected depending on the research question. However, the voice of the person with dementia is still absent to a large extent in the available tools, and further work is required on tools that are designed to engage directly with the viewpoints of people with dementia.

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